THE NEW-YORK

JOURNAL OF MEDICINE

FOR JANUARY, 1857.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Contributions to Practical Surgery.* By DANIEL AYRES, M.D., LL.D., Brooklyn, N. Y. [With Illustrations.]

Case 1.—*Complete Dislocation of the Cervical Vertebræ—Reduction on the tenth day—Recovery.*—E. K., the subject of this accident, was a laboring man, thirty years of age, tall and muscular, but not fat, with a neck longer than the average among men of equal hight. On the evening of the 2nd of October he became intoxicated, was brought home insensible, and did not recover from the combined effects of the shock and his libations until the following morning, when he was supposed by his wife to be laboring under cold and a stiff neck. She made some domestic applications to the affected part, and administered a dose of cathartic medicine. When it was thought sufficient time had elapsed without obtaining relief, he was seen by Dr. Potter, of this city, and afterwards by Dr. Cullen, both of whom recognized a condition which was not only very unusual, but one which they had never before observed. I was then requested to examine the case, which I did on the ninth day after the accident. With some assistance and great personal effort, he was able to get out of bed, moving very slowly and cautiously. Desiring to expectorate, he was obliged to get down on his hands and knees, which he accomplished with the same deliberation. When seated in a chair, the head was thrown back and permanently fixed; the face turned upwards with an anxious expression. The

anterior portion of the neck, bulging forwards, was strongly convex, rendering the larynx very prominent. The integuments of this region were exceedingly tense and intolerant of pressure. The posterior portion of the neck exhibited a sharp, sudden angle at the junction of the fifth and sixth cervical vertebræ, around which the integuments laid in folds. It was difficult to reach the bottom of this angle even with strong pressure of the fingers, and of course the regular line formed by the projecting spinous processes was abruptly lost. He complained of intense and constant pain at this point, which was neither relieved nor aggravated by pressure. With difficulty he swallowed small quantities of liquid, pausing after each effort, and could not be induced to take solid food, since the first attempt to do so after the accident was followed by violent paroxysms of coughing and choking. His breathing was obstructed and somewhat labored, being unable fully to clear the bronchia of their secretion. This, however, seemed rather an effect of the tense condition of the soft parts of the neck, than the result of pressure upon the spinal cord, since he presented no evidence of paralysis, either of motion or sensation, in parts below the neck. The sterno-cleido-mastoid muscles of both sides were felt quite soft and relaxed.

But one conclusion could be formed upon this state of facts, to wit: that the oblique processes of both sides were completely dislocated. The marked rigidity of the head seemed to preclude the probability of fracture through the vertebral bodies, and although the cartilage might be separated anteriorly, yet, the body not pressing backwards sufficiently to produce paralysis of the cord, it was hoped that the posterior vertebral ligament remained uninjured; it was, therefore, determined to make an effort at reduction on the following day. In addition to those originally connected with the case, I am under obligations to Drs. Ingraham, Turner, Palmedo, G. D. Ayres, and a number of other medical gentlemen who were present by invitation, all of whom confirmed the diagnosis, and rendered efficient services:—

The patient was placed upon a strong table in a recumbent position, with a pillow resting under the shoulders, the head being supported by the hand during the administration of chloroform, of which an ounce was given before anæsthesia ensued. Counter extension being made by two folded sheets placed obliquely across the shoulders and properly held, the head was grasped by one hand placed under the

chin, the other over the occiput, and by steadily and firmly drawing the head directly backwards, and then upwards, an attempt was made at reduction, but failed for want of sufficient power. Dr. Ingraham was then requested to place his hands immediately over my own in the same position as before, and steady traction was again made in the same direction. Our united strength was required in drawing the head backwards and upwards, to dislodge the superior oblique processes from their abnormal position. When this was felt to be yielding by Dr. Cullen, (who kept one hand constantly at the seat of dislocation,) Dr. Potter was directed to place his hands under our own, still in position, and assist in bringing the head forward; at the same time the chestwas depressed towards the table. The bones were distinctly felt to slip into their places; the line of the spine was instantly restored, the head and neck assuming their natural position and aspect. As soon as the patient became conscious, he expressed himself ignorant of what had taken place, but free from pain, and, in his own language, "all right." A bandage was arranged to support the head and keep it bent forward. He had an anodyne for two nights following, after which no further treatment was necessary, and at the end of one week he had complete control over the movements of the head and neck. Beyond the debility and emaciation immediately dependent upon protracted fasting and loss of rest, he has experienced no uneasiness since the operation. His appetite is now good, and all the functions perform their duty normally. In a subsequent inquiry, to determine if possible the cause of the accident, he states that he distinctly recollects going into a store in Atlantic Street, near the ferry, and there having angry words with an acquaintance; that he left the store and was proceeding up the street, (which is here a rather steep ascent,) when he was violently struck from behind, over the lower portion of the neck. He likewise remembers falling forward and striking against some object, but does not know what it was, nor what took place until the following morning.

Remarks.—All the vital functions, or those necessary to the support of life, are so immediately dependent upon the integrity of the spinal cord and its investing bony case, that any important injury to either of them commands special attention. Without entering upon the various diseases and injuries to which the spinal column may be subjected, it may be remarked that, in all of them, pressure sufficient to

compress the cord, and thus cut off the line of communication with parts below, is the great result to be dreaded. The point at which pressure may occur is of vast moment, this being dangerous in proportion as it approximates the base of the skull. The rapidity with which compression is produced, also modifies the result. Like all other organs, the spinal cord exhibits the power of accommodating itself to great encroachments, if they are only made gradually: thus, one or more of the bodies of the vertebræ are slowly removed by caries or absorption, and the spinal column, with its contents, bent at an angle, and yet the parts below preserve their wonted integrity. Similar results often follow the slow effusions of inflammatory action, and by subsequent absorption complete paralysis may thus be removed. But such happy consequences are seldom met with when the disease is seated above the lower cervical vertebræ, because above this point the spinal cord gives off nerves which are absolutely essential to the maintenance of vital organs, and their temporary suspension is incompatible with life. These observations are especially applicable to fractures and dislocations of the vertebræ, for, whilst they are notoriously fatal, still partial or complete recoveries have followed very severe injuries when confined below the limits designated.

It was formerly maintained by Sir Astley Cooper, and held by many eminent surgeons, that dislocations of the vertebræ could not take place without the simultaneous occurrence of fracture. These observations are sustained by general experience, in this respect, that where sufficient force is applied to cause the former, it will likewise, in the majority of instances, produce the latter. The exceptions to this rule, where the dislocation is complete, are very few in number; and in most of them death has either been immediate, or soon followed the accident.

Partial dislocation or displacement of the oblique process of one side, giving to the head a permanently twisted position towards one or the other shoulder, although rare, has been repeatedly recognized and reduced by European and American surgeons with various results. Such was the "fortunate case" of Dessault, quoted by Samuel Cooper; that of Guerin, of Paris, mentioned by South; and one by Druitt, which died in the attempt at reduction. Dupuytren, *(Clinical Lectures,)* after speaking of luxation of the atlas on the axis, as generally immediately fatal, and beyond all

the resources of art, remarks, "The luxations of the other cervical vertebræ are generally confined to one of the articular processes, in which the head is carried to one side. The reduction of these luxations is very dangerous, and we have often known an individual perish from the compression or elongation of the spinal marrow which always attends these attempts. Petit Radel saw the case of a child who died during the manœuvres required by this reduction. Hence it is generally recommended to leave the case to itself." In the *Dictionnaire de Chirurgie* we find similar advice from Richerand, Boyer, and (maugre his success,) from Dessault also. These authorities, however, were strongly opposed by Seifert, in *Rust's Magazine*, Vol. XXXIV., and notwithstanding the unfortunate results which have occasionally attended efforts to correct this deformity, we look upon his conclusions as correct, and his directions worthy of imitation. Seifert directs that the patient should be placed sitting on the ground with the shoulders firmly held by an assistant. The surgeon then grasps the head with one hand beneath the chin, and the other beneath the occiput, making extension, first in the direction of the dislocation, then in the longitudinal axis of the neck, and when this seems to have been sufficiently made, he twists the head strongly towards the dislocated side. My friend, Dr. James R. Wood, of New York, safely and completely reduced a partial luxation of this description in a child, by employing similar manipulations. After dislocation of the odontoid process, this is the form of accident to which most authors refer in speaking of luxations in the cervical region.

We would not, knowingly, do injustice to others, nor is it an easy task to exhaust the records of surgical literature; but after extended inquiry, both personal and through friends, we have been able to discover but one case definitely described as a complete dislocation successfully reduced. This is contained in *Chelins' Surgery*, by South, Vol. II., and prefaced by the following remark:—"Hitherto, this dislocation has been only known on one side, as a consequence of external violence, or strong twisting of the muscles." He then proceeds to describe the case of Walther, as detailed in his *Journal of Surgery*, Vol. III. Pt. I., page 197, which we shall refer to again, as it was from this case alone that we received confirmation of our diagnosis, and ventured to attempt the reduction. With this exception, the manner in which the subject is considered by standard authors on practical surgery, is

indicative of great doubt as to its possible occurrence without destroying life; and, with reference to its treatment, the most general allusion only is made. Thus, Professor Miller says, "Luxations of the spine, without fracture of the processes, is a very rare injury, yet has occurred occasionally in the cervical region, ordinarily between the fifth and sixth vertebræ. It has happened by muscular power alone; a maniac, for example, having so caused death by, as it were, forcibly throwing the head from him during restraint in a paroxysm of excitement. More frequently, it is the result of violence applied from without. If life or the hope of life remain, replacement is to be effected by careful extension and coaptation."

Professor Fergusson observes, "Dislocations in this region are few, and of rare occurrence. The cervical vertebræ are occasionally displaced, either as the result of accident or disease. When the former happens, it is customary to suppose that the spinal marrow is so affected that immediate death is the result, especially if the injury is above the origin of the phrenic nerve. I have not myself seen any case of this kind, but I believe there are few in the profession who doubt the truth of the current doctrine."

Professor Samuel Cooper treats the subject more minutely, and states that, "In the upper part of the vertebral column there may be dislocation of the vertebræ, unaccompanied with fracture, because the articular surfaces of the bodies are less extensive, and the spinous and articular processes less oblique. At St. Bartholomew's Hospital there is a preparation in which there is a portion of the intervertebral substance lacerated between the fifth and the sixth cervical vertebræ accompanied with dislocation of the articular processes. By the favor of a gentleman who was attending my lectures, I was once enabled to show the surgical class of University College a specimen of complete dislocation of the middle of the cervical vertebræ without fracture. The person from whom it was taken was killed instantaneously by coming in contact with the top of a gateway as he was sitting upon an omnibus which was going at great speed." He also adds, "If we are to believe the statement of Dessault and others, dislocations of the articular processes of certain portions of the spine have been occasionally reduced." This sentence is rendered more definite by a subsequent paragraph, viz., "As dislocations of the atlas from the second vertebræ may be set down as inevitably fatal, it is unnecessary to say

anything about their treatment. We do hear, it is true, of dislocations of the head being rectified, but these are not the cases under consideration, but merely examples of displacement of *one of the articular processes of the cervical vertebræ*," etc.

Mr. Liston observes, "True dislocation of the spine from the rupture of ligaments and fibro-cartilage is a very rare accident; few cases of it are on record, and in them the injury was in the cervical vertebræ. I have only met with two instances." One of these is stated to have been fatal, and a cut exhibiting the injury given. Nothing is said of the other case, but had it survived, it is probable that Mr. Liston would have noticed the fact. He recognizes "the occasional luxation" above mentioned, but gives neither cases nor treatment.

Dr. Norris, of Philadelphia, in the *American Journal of Medical Science*, Vol. I., New Series, 1841, carefully describes a complete luxation of the fifth cervical vertebræ forward upon the sixth without fracture, resulting from a fall upon the head. In this case, the head bent forward on the chest unless supported; there was paralysis, and death occurred on the third day.

We might multiply authorities to the same purport, many however, are exceedingly vague, and some evidently writing without observation, actually mislead the diagnosis. Thus it is stated that, if the dislocation occur in the neck, there will necessarily be paralysis to a greater or less extent of the parts below.

The case of Walther, previously alluded to, accords perfectly in all its symptoms with that which we have described; yet in neither instance was there paralysis, unless the impediment to respiration and deglutition may be attributed to partial pressure upon the cord. A few anatomical facts may assist our appreciation of this accident. In the cervical vertebræ the anterior portion of the fibro-cartilages is thicker than the posterior, and its flexibility permits a certain amount of extension without rupture. The posterior vertebral ligaments which connect the bodies posteriorly, and separate them from the anterior surface of the spinal cord, are broad and very strong in this region, so that they are capable of protecting that delicate organ even though the fibro-cartilage should separate at its anterior portion from the corresponding vertebral body. It should likewise be remembered, that the cord occupies only two-thirds of the spinal canal, so that there is no difficulty in comprehending that, if the violence

applied is not too great, and other circumstances are favorable, a complete dislocation may take place without the induction of sufficient pressure to produce dangerous paralysis, provided that this is not continued for too great a period. The value of Walther's case to us prompted the effort to make this also available to the profession; and our design has been truthfully assisted by the artist whose anatomical knowledge was essential to success. In discussing the treatment, it must not be forgotten that this was not a question of deformity alone, for death by starvation was inevitable, even had he escaped the consecutive damage which would probably have ensued upon the spinal cord. The attempt was therefore justifiable, whatever might have been the result. Again, as to the degree of force which should be used, I know of no rule but to employ sufficient to produce the effect; and as we had no adequate conception, *a priori*, of the amount that would be requisite to insure reduction in this case, every precaution was taken that it should be gradual, steady, in the right direction, and only limited by the effect.

Case 2.—Gun-shot Wound of the Shoulder—Two and a half inches of the Clavicle Removed—Reproduction and complete Recovery.—The wonderful effects of the mind upon the results of injuries and operations, frequently forces itself upon the notice of surgeons. A buoyant, hopeful, cheerful, courageous disposition often seems to foreshadow and institute success; whilst a foreboding, desponding, gloomy, and timorous state of mind, will often blast the most favorable conditions, and thwart the best efforts of art. Nor is this to be supposed a transposition of cause for effect. The instances in which both sudden and gradual death have been produced through the direct agency of mental action are too numerous and well-attested to admit of doubt; and it is far from illogical to infer the reverse to be true. In fact, our daily practice of giving cheerful and hopeful encouragement recognizes the value of this therapeutic agency. In the following case, this favorable condition of mind formed an important controlling element.

A. K., a short, stout man, of naturally excellent constitution, hardened by activity of life, and remarkable simplicity of habits, was sixty-two years of age at the time of this accident, and yet exhibited all the vivacity and endurance of youth. Whilst engaged at work, some two miles from the city, he was met by an acquaintance who was out shooting, and they became enthusiastic in a disputation on theo-

logical subjects, for which the old man had a remarkable predilection, and was always prepared. Proving himself too powerful for the young man, and withal becoming rather personal in his discourse, the latter pointed his gun at his antagonist, by way of intimidation. This was heavily loaded with No. 6 shot, and, being out of repair, suddenly exploded. The unfortunate man was standing in an oblique position, within half a yard of the muzzle. The whole charge, including the wadding, entered his body near the sternal end of the right clavicle, forming a large, ragged wound, extending to within half an inch of the acromion process, and shattering the bone into several large and numerous small fragments. The muscles and fasciæ attached to this bone were so torn up, that the subclavian vein and brachial plexus were visible, and the subclavian artery felt pulsating at the bottom of the wound. The charge passed towards the right shoulder; after tearing both pectoral muscles, perforating the coraco-brachialis and deltoid, it emerged from the lateral upper third of the arm, forming there a ragged wound an inch in diameter. He lost a large quantity of blood on the ground and during his removal to his home—sufficient to induce syncopy; and he had taken several ounces of brandy. I saw him at one o'clock, (Sept. 23,) two hours after the accident; he had rallied, and spoke with great spirit and courage; pulse at the right wrist could be felt, although feebly. On carefully removing the dressings which had been hastily applied, and clearing away the coagula, two arteries at the root of the neck bled quite freely, and were ligatured. After removing as much of the shattered bone as could be done with safety, the lips of the wound were approximated with adhesive straps, and covered with lint retained by moderate pressure. The right arm being supported in the bent position, and firmly confined to the side, the patient was placed in bed, with the head elevated. Emphysematous crepitation was now perceptible over the whole right shoulder, and this was so considerable, that it was supposed the pleura had been punctured by one or more shot, but if so, the opening must have quickly closed, for in a few days this emphysema entirely subsided.

He was ordered small lumps of ice to allay thirst and nausea which was present, and perfect quietude enjoined. Complete reaction was established in the evening; pulse 80; free venous oozing from the wound, to suppress which, additional lint and pressure were applied.

September 24.—Hæmorrhage ceased entirely; pulse 100; skin soft; slept a little towards morning; has some pain in the wound, and an erethematous blush is perceptible around it. Ord.—majend. sol. morph., 15 drops, and gruel for diet.

September 25.—Has passed an excellent night, and feels remarkably well. Dressings firm and undisturbed; pulse 80; his bowels were moved with a dose of magnesia, and he progressed favorably, until

September 29.—Complained of severe pain in the right hypochondrium, which was mitigated after two natural alvine discharges, but returned with increased severity in the evening. He was directed to take one ounce of castor oil, with a carminative.

September 30.—Oil operated, but has afforded only partial relief; the abdomen is tympanitic; tongue furred; urine turbid; skin hot; pulse 100; the countenance flushed and anxious. The dressings over the clavicle are bathed in pus; slough begins to separate at its edges, and covers the whole tract of the clavicular wound. A large cellular slough is being thrown off from the arm, to which warm water dressing is applied, covered with oil silk. Ordered to take gr. x. hydrarg. sub. mur., to be followed with saline mixture. It was apprehended, at this stage of the case, that serious, if not fatal, hæmorrhage might occur at any moment. He was, therefore, most critically watched, and ample means prepared to apply immediate pressure.

October 1.—The cathartic produced several copious and black discharges, with great relief to all his constitutional symptoms, and his general condition is vastly better.

October 10.—Patient continues to do well; slough came away from the arm to-day, with a portion of wadding and a large quantity of shot, followed by a copious, purulent discharge, of laudable character. Allowed beef and chicken broths, but thick oat-meal gruel is his staple diet by preference.

October 15.—Slough from main wound removed with dressings, disclosing the whole surface covered with granulations, which are observed to rise and fall synchronously with the vessels below. The sternal end of the clavicle, dry and black, will probably necrose; distance between the fragments, two inches by measurement. The wound was gently drawn together by adhesive straps, diminishing the open gap to one inch and three-quarters; this interval, protected by lint, spread with Turner's cerate, and gentle pressure

over all. This is more readily accomplished and less frequently disturbed since the slough has separated from the wound on the arm ; the sub-cutaneous channel thus formed acting as a drain for the upper and more important wound.

October 25.—Patient has progressed favorably, and wounds are granulating slowly, but suppuration is very profuse, and with great difficulty his clothing and bedding are kept in a decent condition. This annoyance was principally felt in the constant change of dressings necessary to support the arm and shoulder. This consisted of a well-padded ring passed over the opposite shoulder, to which slings and bandages were adjusted ; these, however, were finally discontinued, and sole reliance made upon position and support by properly arranged cushions. The patient continues in excellent spirits, although considerably reduced—his appetite is fair, and he is liberally supplied with nourishment. Is taking quinine and from one to two pints of ale per day.

November 15.—The necrosed portion of clavicle separated to-day ; the wound is gradually closing, and discharge diminishing. From this period onward my notes exhibit progressive improvement. He was allowed to sit up towards the latter part of November, but the wounds about the shoulder were not healed until January. Between that period and the following April, a number of abscesses formed about the upper portion of the chest, discharging shot ; he had collected over a hundred evacuated in this manner.

The fragments of clavicle removed and preserved, when carefully adjusted, confirms the statement, that two and a-half inches, or more than one-third, of this bone was destroyed ; and yet, at the end of one year from the time of accident, he exhibits a shoulder perfectly symmetrical with its fellow, without drooping or falling forward. The cicatrices are hard and firmly consolidated with the parts below. He is gradually regaining the use of his arm, although its field of motion is contracted by the imperfect action of some of the injured muscles, particularly the deltoid.

Remarks.—In reviewing the facts of this case, it is hardly necessary to add, that the advanced age of the subject, the extent of injury, its close contiguity to parts of vital importance, the reproduction of so considerable an amount of bone, the long sustained exhaustive discharges, and final complete recovery, form a combination of circumstances rarely to be expected, and still less frequently seen.

Case 3.—*Varicose Tumor of the Stomach, causing Fatal Hæmorrhage.*—Hæmorrhage from the stomach is an occasional attendant upon uterine disorders, and of very frequent occurrence in connection with organic diseases of the liver and chilopoietic viscera. The investigations of pathologists upon this point have led them to conclude, that it takes place as a transudation through the tissues of the minute vessels, without actual lesion or rupture of their coats. This view coincides with the facts and symptoms as they usually take place, and is, undoubtedly, correct as a general rule. But there are exceptions to it, and the following case not only illustrates this, but likewise the occasional difficulty of distinguishing aneurism of this region.

J. M., 30 years of age; native of Germany; married; of active temperament; never intemperate, but accustomed to the moderate use of malt liquors. He had never resided in a malarious district, nor suffered from fever; was complaining more or less for four years and under the care of Dr. Palmedo, but always able to attend to business, with rare intervals of a few days. His usual symptoms were those of dyspepsia, with constant oppression at the epigastrium, often amounting to intense pain. Bowels habitually torpid, and, occasionally, obstinately constipated. The abdomen was frequently distended with flatus, and always prominent at its superior portion. A deep-seated tumor early began to be perceptible below the left inferior ribs, and gradually increased until it filled the left hypochondrium. It emitted a dull sound on percussion—and always pulsated strongly. He had an attack of ascites, with general anasarca, a year before his death, which yielded to cathartics and diuretics without returning. Emaciation very trifling until within the last four months of his life, but his general appearance was sallow and unhealthy. Two days before death, he commenced vomiting blood in large quantities and slightly coagulated; similar discharges took place by the bowels. Although temporarily restrained by ice, acids, and astringents, with opium, he suddenly expired after vomiting a large wash-basin full of coagula. The patient was supposed to be laboring under aneurism of the abdominal aorta, and the mode of termination seemed to confirm this diagnosis; its enormous size and encroachment on neighboring organs would rationally account for their disturbance.

Post-mortem appearances.—Strong cadaveric rigidity; surface pale; very little sub-cutaneous fat; intestines contained

coagula; liver small, firm, and far advanced in cirrhosis; spleen occupies the whole epigastric and left hypochondriac region; ovoid in shape; by measurement, eleven inches long, ten inches broad, and five inches thick; surface of grayish red color, shriveled and corrugated; substance pultaceous and free from fibrinous deposits; splenic and gastric veins very much enlarged and tortuous. The stomach, filled with coagula, was removed for special examination. This organ was opened carefully along its lesser curvature and supported upon a frame. The principal gastric vein, measuring half an inch in diameter, was connected with a short tube, into which water was allowed to descend by its own weight. After running a tortuous course for two inches, it opened into a cavity as large as an English walnut, from which smaller veins diverged in various directions over the whole organ. The cavity thus distended formed a tumor presenting upon the mucous surface, and about its centre a ragged opening, one line in extent, was made visible by the stream of water pouring from it, thus indicating the source of hæmorrhage. The tissues about this orifice were so tender, that with great difficulty it could be pinched up and ligated sufficiently firm to retain the permanent injection of plaster of Paris. In the vicinity of these veins, all the tissues of the stomach appear to have degenerated, and the cells loaded with fatty deposit.

Case 4.—*Imperforate Anus—Descending Colon terminating in the Bladder—Operation through the Perineum—Subsequently* AMUSSAT'S *Operation for Artificial Anus.*—Malformation at the lower portion of the bowels are found in various degrees, from the simple film of cuticle stretched across the anal opening, up to the complete absence of any vestige of a rectum. The proceeding of the surgeon must be guided by the peculiarities of each case, and modified according to the distance of the occluded intestine from the perineum. Where this is short, simple incision and subsequent dilatation is sufficient. When this fails, or the distance is too great after reaching the intestine, it may be separated from its lateral connections, brought down to the inferior outlet, and made fast to the integuments by points of suture. In many of these cases, the operation is necessarily exploratory, and although success may not always crown our efforts to remedy a radical defect of nature, still surgery is often a valuable palliative, as well as conservative art; and upon this ground alone, I felt myself justified in the treatment of the following case.

I was requested by Dr. Osborn, formerly of this city, to see a male child, five days old, and received the following history: The child was born at full time; of healthy parents; appeared well developed; nursed and slept well until the third day when it became restless, and cried much. On inquiry, finding that the bowels had not been moved satisfactorily, he ordered a mild laxative. It gradually became worse when vomiting set in, succeeded by hiccough and violent straining. The doctor then instituted a careful examination and found the anus closed; this oversight is chargeable to the unintentional misrepresentation of the mother, as was proved by subsequent events. Finding the natural cleft of the nates with its central *raphè*, but no indications of an opening, I commenced an exploratory incision where it should be found, and had advanced so far as to feel the promontory of the sacrum, but could detect no impulse, although the child was crying lustily and straining forcibly. The sound of air escaping led us for a moment to think that the intestine was opened; but failing to find it, after careful searching, I was about to abandon the operation, when my attention was drawn to the penis. The prepuce was inflamed and slightly swollen; uncovering the glands, a dark matter was observed issuing from the meatus, although the child had passed a large amount of clear urine just before the operation. It was concluded that the intestine either terminated in, or was connected with, the upper portion of the bladder; thus accounting for the sound of escaping air. This was confirmed by the mother, now, for the first time, exhibiting some cloths marked by fæculent stains; here, then, was the source of her mistake. A small grooved staff, introduced through the meatus and freely entering the bladder, was firmly pressed towards the perineum. I cut down upon it as far back as possible, and reaching the groove, passed the scalpel into the bladder, and brought it out at the first exploratory opening, thus throwing both wounds into one. A large quantity of fæcal matter was instantly discharged, with apparently great relief to the child, for it went to sleep shortly afterwards. The hæmorrhage was not troublesome, and ceased on introducing a piece of sponge. This was retained for four hours and then expelled with a still larger excrementitious evacuation. The operation was performed on the 20th of January, after which the child passed a tranquil night, with complete subsidence of all its previously distressing symptoms, and nursed

freely. A roll of linen, well oiled, was directed to be retained in the posterior portion of the wound.

January 25.—Patient has continued to have several natural alvine discharges daily since the operation, all of which pass by the artificial opening, whilst the greater portion of its urine is evacuated quite clear by the meatus; occasionally a portion of it passes in the other direction.

February 15.—The child's health is good, with no return of unpleasant symptoms. The perineal wound is still suppurating and apparently contracting, notwithstanding large bougies are directed to be used several times a day.

March 1.—The opening was so much contracted that it was enlarged with a bistourie, and dilatation ordered more regularly, after which the child improved again rapidly. Partly through fear of doing harm, partly through negligence, but probably, most of all from the strong tendency of all such wounds to close, I found my little patient, on the 1st of June, almost as bad as at my first visit; a probe would scarcely pass by the artificial opening; it had become languid, nursed but little, and was loosing flesh. The abdomen had become enormously distended, and covered with tortuous veins. Its evacuations were again forced through the urethra in paroxysms of agonizing suffering, and its piercing shrieks, heard by those residing in the neighborhood, excited the deepest sympathy. At the urgent solicitation of the mother, which was hardly necessary to enforce the more direct appeals of intense suffering, I determined to establish an artificial anus in the left lumbar region, which was accomplished without difficulty, adopting the method of Amussat. The immediate result was the discharge of an immense accumulation of gas and hardened fæces, with speedy subsidence of the abdominal distension, and relief from pain. On the following day prolapsus of the colon took place to the extent of ten inches, which was readily replaced, and retained by compress and bandage. After the sutures were removed, and the tissues became firm, no farther difficulty was encountered. The relief from suffering and improved nutrition soon became apparent in the augmentation of flesh and strength. At this time I lost sight of my little patient, and was subsequently informed that it continued to improve until the month of August, during which the weather was very hot. Difficult dentition ensued, with its train of exhausting symptoms greatly aggravated by the loss of its mother's milk, and it perished at last through cholera infantum.

Case 5.—Comminuted Fracture of the Humerus, complicated with injury of nerves, vessels, and muscles—Great displacement of fragments—Operation—Recovery.—In many cases of severe injury of the extremities, "the question of amputation," as it is termed, becomes one of great difficulty; and no problem in surgery demands broader experience, and more mature judgment, than that which proposes to carry conservatism to the extreme limits consistent with the preservation of life. With youth and a vigorous constitution, nature sometimes accomplishes results which challenge our unbounded admiration. The due appreciation and measurement of these powers, timely and judiciously assisted by the resources of art, has furnished the most beneficent achievements of modern surgery.

From among many instances illustrative of this recuperative power, and falling under my own observation, the following case may lead us not to despair under the most desperate circumstances, where the upper extremity is involved.

A fine young lad, 15 years of age, who was the only hope of an aged relative, desirous of contributing to their mutual support, obtained work at a large rope manufactory in this city. He was employed in supplying one of the machines with hemp, which required him to pass and re-pass beside a large band-wheel carrying the main belt which set the machinery in motion. Whilst thus engaged in transporting a double armful of loose hemp, he failed to observe this belt, and, coming in contact, was instantly caught up by the left arm, and carried over the wheel with sufficient force to throw his boots from his feet across the room. This obstruction threw the machinery out of geer, and he was extricated from his position as soon as the workmen could cut away the long strands of hemp which were so completely matted around his head and chest as to stop respiration. This caused some delay, and doubtless contributed, along with the contusion of the parts, to produce the severe congestion of the lungs which afterwards ensued. The whole left side of the chest appeared to be compressed and flattened; the shoulder and scapular region, in addition to contusion, exhibited several lacerated wounds, which were deep and bled freely. The left arm was found broken at its middle third, completely twisted upon its axis, and flattened to the thickness of the hand, with no pulsation nor sensation in the parts below. In this condition he was found, and attended by Drs. Otterson and G. D. Ayres.

On the following morning, I discovered, upon examination, the humerus comminuted, and the superior and inferior fragments widely separated; the former, driven through the triceps, was presenting a sharp point underneath the integuments, whilst the latter was so entangled in the muscles occupying the front of the arm, and the whole so swollen and infiltrated, that it was impossible to make out its exact position. It was deemed imprudent in his present condition to attempt further coaptation; in fact, this was out of the question without exposing the bones. The pulse was not perceptible in the wrist of the injured extremity until the following day, and then very feebly; its temperature much lower than the opposite; color dusky, with total absence of sensation and motion. The arm was, therefore, placed in a fracture box, and every attention given to the internal injuries, which for a time threatened to prove fatal. There was severe constitutional irritation, manifested by extreme restlessness and rapid pulse; intense pain in the thorax; dyspnœa; and copious bloody expectoration. These symptoms were met by large anodynes, mercurials, and aperients.

After the lapse of nine days, the chest symptoms yielded, and his general condition became much more hopeful. The circulation in the injured extremity had improved, but was still weaker than in its fellow, and no indication of returning sensation. The arm swollen and œdematous; integuments over the upper fragment inflamed and about to ulcerate. For the last twelve hours he has complained of more pain in the arm than during the whole period since the accident; it was, therefore, decided to make an exploratory operation, and then amputate, if necessary.

With this view, after being placed fully under the influence of chloroform, a liberal incision was made over the upper fragment, dividing the fibres of the triceps so as to free it completely, and permit the application of the saw. An inch of its sharp extremity being removed, the knife was again made to divide the fascia and muscles situated below it. By this proceeding, access was gained to a cavity filled with coagula and bony spiculæ; the muscular tissue was found extensively lacerated, and the natural relation of parts thereby confused. The lower fragment was finally extracted from the sheath of the biceps, through which it had been driven into the body of that muscle. The principal nerves of the arm were known to be seriously injured, if not divided; their contiguity to the brachial artery and its impaired circu-

lation rendered it probable that this also was lacerated; it was, therefore, a source of great anxiety, and complicated the manipulations necessary to bring the broken fragments into position. But, after the wound was sponged with cold water, the hæmorrhage ceased, and it was now determined to give nature a chance. The parts were coaptated; the wound closed with isinglass plaster; the arm bent at an easy angle placed in splints of strong iron wire gauze, so arranged as not to impede the circulation. Anodynes were necessary for a few days, and the case progressed to a favorable termination. It is unnecessary to detail the minutiæ of the after treatment; the wound suppurated freely, and discharged several considerable portions of bone, the granulations at times becoming very exuberant; this process was greatly facilitated by the occasional application of the acid nit. hydrarg. Generous diet was early employed, and constant attention required to prevent undue pressure at any point, which, owing to nervous impairment, was quickly prone to inflame and slough.

At the end of twelve weeks, the bones were firmly consolidated, and, passive motion having been previously employed, all dressing was removed, and use of the limb encouraged. Six months after the accident, he resumed his business; and now, after the lapse of a year, he has a limb daily improving in usefulness; the sensation is still imperfect, and it requires protection from cold; he can flex the forearm and hand strongly, but the extensor muscles are yet very feeble; he can carry a heavy chair or a pail of water when it is once in his grasp.

Conclusions.—From the length of time during which the circulation was absent from the wrist—its slow return and marked feebleness—the continued diminished temperature; the immediate proximity of the main artery to the comminuted bone and severed nerves—the severe stretching and compression which inevitably took place at the time of injury—and, above all, being unable to detect pulsation immediately above the bend of the arm, even at this date, I am forced to conclude that the brachial artery was obliterated at the seat of injury, and the circulation carried on through the inosculating branches. If there is any condition in which gangrene of the upper extremity could be anticipated as the result of injury, it certainly was in this; at the same time, I wish to guard against any invidious application of it to the rules of surgical practise—by stating my opinion,

that the case is an extreme one, yielding unexpected results, and as such it is presented.

Case 6.—*Adipose Tumor of the Thigh, involving the Saphena Veins—Removal—Phlebitis—Recovery.*—Among the numerous forms of tumor brought under the observation of surgeons, the adipose or fatty variety is most frequently the subject of operation. These, although they may attain enormous dimensions, are generally so situated as to be easily and safely removed. It is only when they involve important parts, and encroach upon deep-seated structures, that they become subjects of special interest.

E. B. C. was about 38 years of age; stout and robust habit; accustomed to a very active life and much exercise on horseback; enjoying excellent health up to the time of operation.

Several years previous, he noticed a tumor growing upon the inside of the left thigh, at the junction of its upper and middle third. This has gradually increased until it measures ten inches in length; is ovoid in shape, and slightly flattened; the circumference of the thigh being twice that of the opposite one. It presented all the characteristics of adipose tumor; the integuments quite movable over it, but when seized firmly and elevated, it seemed intimately connected with the parts beneath. The limb was cumbersome from its increased burden, and imparted a straddling gait in walking. The veins of the foot, leg, and thigh are enormously enlarged and varicose, having long required the use of a bandage, and frequently productive of great pain after prolonged exercise.

After some preparatory treatment, the tumor was approached by a straight incision, parallel with and reaching nearly the length of the thigh, and without difficulty enucleated from its superficial and lateral connections; but, posteriorly, it was so firmly attached as to require the knife in order to bring these relations into view. This large mass being removed, was found connected by an isthmus with a second, about half its size, the capsule of which was lost in the fascia lata. Through this all the branches of the great saphena vein were found to run, emerging in a large trunk above; this was, therefore, divided and held aside while the remainder of the tumor was rapidly dissected from the muscles beneath. The hæmorrhage from the vein was so copious, that a ligature was absolutely necessary to restrain it. Several arteries, very much enlarged, had been secured

at the time of division; the wound was cleansed, its flaps brought together by one point of suture, and strips of isinglass plaster; a bandage from the toes up, supported compresses placed over the flaps, and leaving the line of incision free. Perfect rest in bed enjoined, and the limb elevated.

On the following morning, he appeared to be doing well, although his sleep had not been good, which was attributed to the excitement. At the end of forty-eight hours from the operation, he was seized with violent rigors, followed by fever and severe headache, with pain in the back and limbs; frequent pulse; furred tongue; constant nausea and thirst; the left groin tender and a little swollen, but no pain referred to the wound.

Knowing that a loaded state of the colon at the time of surgical operations, necessarily sudden in their performance, would give rise to just such symptoms, it had been anticipated by low diet and cathartics; suppurative inflammation of the veins was, therefore, to be suspected. He was ordered ten grains of Dover's powder, with an equal quantity of the sub. mur. hydrar., to be followed by a saline draught. Copious discharges of a watery character took place four hours after taking the latter medicine, but with no improvement of symptoms. Bilious vomiting ensued; the skin became sallow, and, finally, deeply jaundiced; pulse frequent and jerking; tongue dry and brown, and some delirium; urine scanty. His chief complaint is of great prostration and thirst.

Directed, iced sparkling cider, and small lumps of ice to be given *ad libitum*, and the following powder to be administered every three hours.

℞. Hyd. sub. mur., gr. ji.
Sulph. quinine, gr. v.
Pulv. G. opii., gr. ss. M.

The plasters were removed from the wound, being raised with the cuticle along their whole tract by vesications, filled with a deeply yellow serum; wound gaping at its upper portion, and discharging thin greenish serum. Ordered it to be covered with warm water dressings and oil silk.

During the three succeeding days, the patient manifested no improvement, but, in addition to the previous symptoms, were added irregular chills and profuse perspirations, followed by great restlessness and exhaustion; pulse varying from 120 to 130, and at times very feeble. The same line of treatment was pursued, with the addition of aromatic spirits of ammonia and chloric ether, occasionally.

On the seventh day from the operation, copious discharges of pus took place from the upper portion of the wound, simultaneous with an increased renal secretion, heavily loaded with a ropy sediment, and of highly offensive odor; with it the frequency of pulse began to subside, and all his alarming symptoms gradually abated. This peculiar discharge continued for several weeks, but at no time so copious as during the first twelve hours after its appearance. He was allowed strong broth, with a moderate quantity of solid food and fruit, and continued the use of tonics. The wound healed slowly but kindly—at the end of six weeks he was permitted to go into the country, and a long elastic wove stocking, extending nearly to the groin, was directed to be worn upon the limb during the day-time. Under change of air, he rapidly regained his health, and the limb has regained its normal condition.

Remarks.—The salient point of interest in this case is the manner in which resolution of the fearful symptoms of phlebitis took place. The same form of medication, and, indeed, every form, has so frequently proved unavailing when the symptoms of pyæmia supervene upon surgical operations, that it is justly regarded as one of the terrors of the art. It is a question, therefore, whether the present result should not be viewed rather as one of those beautiful and beneficent natural provisions, by which a vicarious office is temporarily performed by one of the great eliminating emunctories of the system. I was strongly inclined to adopt this explanation of the phenomena at the time of their occurrence, and have since received additional confirmation of this opinion, from the conclusion of a case occurring in the practise of my friend, Dr. S. S. Purple, of New York, to which he has kindly permitted me to refer. The patient was 34 years old, and had been suffering for some time with all the rational and physical indications of empyema occupying the left pleural cavity, with bulging of the intercostal spaces, and indications of pointing below the scapula. In his failing condition, paracentesis of the thorax was strongly urged by his physicians, but pertinaciously rejected, "the alternative of death being preferred." Suddenly and unexpectedly, his urine became copious, and loaded with a thick, ropy, and highly offensive sediment, which continued for some time, followed by an improvement in his symptoms and general condition. The patient ultimately recovered, and is now well.

ART. II.—*On the General Development of the Human Frame in an Ethnological Point of View.* By J. M'ELHERAN, M.R.C.S.E.

SPEAKING in general terms, we may say that races of men are degeneracies of men; that varieties of form in man, as well as in the lower animals, are varieties of arrested development.

But arrestments in the animal kingdom do not follow a straight course. Forms are diverged as well as arrested; taking the omnivora as the central stripe, the herbivora and carnivora diverge to the right and to the left. If we assume that races were created separately, then we should say that the species developed upwards. But if we assume original unity, we should say that the varieties diverged downwards. I hold to the latter position, because we observe in the accidental arrestment, even of the highest race, divergencies sometimes to the carnivorous, sometimes to the herbivorous organism. This phenomenon, I believe, arises from the unity of variety and versatile power of the vital principal in man coöperating with material causes.

The simice stand nearest to man, but I am not aware that they present this metamorphic power and unity of variety, We can, however, perceive an approach to it in their different species. The chimpanzee being herbivorous, while the ourang has several decidedly carnivorous points of development, as seen in the teeth, the form of brain, large zygomata. etc. In lower orders we see little of this mingling of stripes.

Forms of lower animals are more fixed, and there is less evidence of a versatile vital principle; but even in them we see this immaterial power in the phenomena of intermixture. Surely, we must acknowledge that the food, the process of nutrition, and the organism, all that is palpably material, is the same in different races of sheep. There is no incompatibility so far as material elements are concerned, because they readily amalgamate. But, gradually, one type eliminates the other, evidently showing that there is a vital principle, a conservative agent at work, superior to the mere material elements.

The endless varieties of feature and form are evidently due to the antagonisms of the material and spiritual powers. We have to notice, not only *arrestments* of development, but, also, *divergencies* of development. In the simple arrestments, we see merely the varieties of forms peculiar to higher and lower beings of the same stripe and species, or of the forms

peculiar to different ages of life; one person growing up in the infantile development, another progressing to the mature athletic, a third to the intellectual. Besides these divisions, there are endles ssubvarieties produced by an eccentric distribution of the vital force, as seen in the varied proportions of extremities, cranial forms, and features. The *beau ideal* is the corelative development of all the tissues and regions—abdominal and nutritive, thoracic and locomotive, cephalic and intellectual. But, in real life, the development of tissues is unequal, the fat and fluids prevailing in infancy and in the female; muscle in the adult athlete; nerve in the intellectual; bone in the aged. The fat of infancy and bone of age predominate in inferior races.

In developments, we may observe that the eccentricities of form are, however, ruled by a law of compensation, an increase in one feature, viscus, or region, being generally accompanied by a diminution in another. The upward developments are not coextensive and corelative in all the tissues, viscera, and features.

Nature approaches man through the lower animals, not in a regular series, but eccentrically—now in one region or viscus, now in another; often overleaping the mark, as it were. Thus she makes the brain of the chimpanzee superior to the dog's or sheep's; but in diminishing the capacity and length of snout, and in drawing the eyes together, she overdoes it; leaving scarcely a trace of nose, and the eyes too approximate.

I need not multiply examples of this eccentricity. They occur in man as well as the lower animals. Some men have the nutritive, some the muscular, some the nervous system most highly developed; but we must take care not to confound these eccentric forms with the radical types permanent in races. In these various eccentric forms in which we observe compensations—one part or region generally losing what another gains—we see evidence that there is, in each individual, a certain quantum of vital principle, but which is variously distributed in various individuals. This law of compensation cannot be explained, I think, by any material theory.

Under a process of starvation and oppression, a race first degenerates in the mouth and digestive apparatus; then in the nose, chest, and locomotive system; lastly, in the brain and cranium. When the last stage of degeneracy supervenes, regeneration is slow, and in some instances apparently impos-

sible; because the nervous centre, the citadel of life, that held out longest has yielded, not so much to the depression of the lower regions, as to the diminution of the vital principle.

This leads me to consider the second kind of degeneracy, which are radical and permanent; types which we should rather call stereotypes. Permanent arrestments of development, or stereotypes, are to be found in all races. That is to say, the distinctive national features of each race depend upon some peculiar kind or degree of degeneracy; these form the subjects of comparative ethnology. The highest races, then, have their peculiar features, which approximate, or degrade, or diverge, more or less, from their ideal. In them, however, arrestments are chiefly accidental and temporary—types not *stereotypes*.

Having the highest range of development, and the most numerous points for arrestment, they present the greatest varieties. You can find in any Caucasian, or Celtic race, forms not generally identical with, but analogous to, the types of all other races. In the purest Celtic race, for example, you find all forms—infantile, athletic, intellectual, herbivorous, carnivorous, and omnivorous, Negroid, Grecian, and Kalmuck.

In the degradation, or temporary arrestment of development in the Celtic races, there is only a general resemblance to the stereotypes of inferior races. Even in the lowest forms of the Celtic, there is a different *style* of finish. The features are more or less *sculpated*, whereas, in the low Gothic, they appear *moulded*, or *fused*. Throughout all races, the nutritive foundation of the system and the features of the face afford the most general resemblances; the chief distinction is in the brain and mind. Hence, while Gothic and low Celtic faces are often similar, their crania are almost always distinctive. The chief distinction between the degenerate Celt and the Goth, or Negro, is not so much in the external form, which is dependent upon the inferior tissue, but in the character, which results from differently formed brains; not only differently formed, but differently proportioned in respect to the length of spine, size of jaws, etc. In these particulars, the lowest Celts retain their superiority over the highest Goths and Negroes.

A Gothic or Negroid infant is, in many respects, like a Celtic fœtus, and the adults of the lowest races are analogous to the children of the highest. The low races seldom or never develop beyond the infantile or athletic stage; but

the highest races often exhibit arrestments. The degradation of the higher is like the maturity of the lower.

I will endeavor to supply what is desired in ethnology—a scientific classification and ground of comparison. Surely, it is childish to compare skulls, like beer-pots, according to the quantity they hold, without reference to the size of face, length of spine, etc.; or, to class them according to length of cranium, brachycephalæ, and dolichocephalæ, without reference to natural history, is equally arbitrary; or, to class them according to place of birth, is still more ridiculous. Morton, Agassiz, Ritzion, Blumenbach, Owen, Camper, etc., had no intelligent principle in their methods.

We have two grounds for a scientific classification of human types:

1. In the physiological development of the individual, as regards age and sex.

2. In comparative anatomy and natural history—in the omnivorous, herbivorous, and carnivorous orders.

We may say that an individual belongs to the Celtic or omnivorous *order*, that his species is the infantile, the infanto-athletic, the athletic, the athleto-intellectual, or the intellectual, and that he belongs to the masculine or feminine *variety*. The variety according to sex is important, because the human male approaches the physique and temper of the carnivora, the female the herbivora.

The masculine warlike Celts of the Roman, Highland, or Milesian Irish types approach the Gothic form and character; while the Phœnician Irish, the Athenians, and Ancient Egyptians resemble more the feminine Hindoo and North African.

The carnivorous and herbivorous races of a lower range of development are less complicated in their classification.

We may say of a Gotho-German that he is of the carnivorous order, and of the infantile, or athleto-intellectual species, seldom or never pure intellectual. If he is *feminine* in variety, it is more owing to want of beard and muscle than to the ovality of the female form of skull.

The Gothic skull is seldom or never oval; the Hindoo, on the contrary, is generally feminine.

Races, moreover, have been formed by mother Nature in different *styles* of art. The lower, being rough moulded, the features are fused, and the heads flattened and distorted, as if they had been made of soft material, and *run* before drying was completed. The highest races, even of the infantile forms, are more symmetrical, harder, and sculpated.

The combined phenomena of *order*, *species*, *variety*, and *style*, constitute the TYPE of an individual, or race.

Each race has its peculiar type or stereotype, in accordance with the aggregate developments and temperaments.

The central *Celtic* presents all types, though the style is peculiarly its own. The Celtic races and their descendants in America show the highest standard. Radiating from them to the north, east, and south, respectively, the carnivorous masculine, the herbivorous feminine, the athletic, the infanto-athletic, the infantile, and lastly, in the outer realms in all directions, there is what may be called the bruto-infantile.

CRANIA.

IN my systematic work, the entire physique of the various forms, and types, and temperaments will be described at length. In regard to crania, it may suffice here to say that I divide them according to the same natural system.

1. *Embryonic.*—This is the lowest and truly brutal or *base* form of skull—large projecting face, and small pyramidal calvarium, as seen in idiots, and the very lowest of the human races in all the outskirts of the world. In the carnivora, the basilar development is *lateral*, flat face, large zygomata, wide intermastoid diameter, etc., as in the felines. The low herbivora, on the contrary, exhibits an antero-posterior basilar development, as in the sheep, ox, etc. The one is the true pyramidal, the other the true prognathous.

2. *Infantile.*—This formation is higher than the last, the brain being largely developed; yet the face presents, even when large, the flat unchiseled bones of infancy. *Angularity* of the calvarium, resulting from the prominences of the centres of ossification is the chief characteristic of this variety of skull. There is also a frequent want of symmetry and a roughness in the suture.

The Gotho-infantile is short and angular, and when the mouth is developed, the palatine arch is flat and broad, and the alveolar arch wide in proportion to the jaws and chin which is angular.

The Negro-infantile is long and angular, and the mouth in the adult is projected and large in proportion to the chin, as in the herbivora.

The Celto-infantile is the ordinary infantile form of our race, and is never so low, though it partakes of the peculiarities of the above—sometimes of one, and sometimes of the other. The lowest forms of the northern Celts may

be called Gotho-infantile, of the southern Celts—Negro-infantile.

3. The physical or athleto-intellectual is the intermediate and transitional and most indefinite. The brain and face are pretty well balanced. The mouth, nasal fossæ and orbits, and foramen magnum are not so large, in proportion to the bones that contain them, as in the infantile; the chin is large, the jaws well set. The peculiarities of the carnivora and herbivora are not so well marked and divergent as in the infantile. The Celtic hercules is the highest type of this variety.

4. The pure intellectual, or *beau ideal*, belongs to the Celtic or Celto-Germanic race of the Rhine, and to them alone. Inferior races often approach this variety in outward resemblance, but the intellect and, we may safely say, the structure of the brain is inferior.

In this variety there is the masculine intellectual development of Jupiter, Homer, and other heroes and sages, and the feminine development of Raffael, Shakespeare, and such like gentle beings.

Several methods of cranial comparison have been invented by anatomists, each good so far, but very deceitful if taken alone. In my early investigation, my measurement of crania and comparative observations were limited and imperfect, because there was no *system* for the student.

Daubenton's measurement of the *foramen magnum*, in relation to the orbits, prove that, as a general rule, the attachment of the spine to the skull recedes backwards in proportion as we descend the scale of animal formation; in other words, that the highest race has the largest projection of skull backwards beyond the spine. This is only true as regards varieties in each grand division of race. The Gothic, or carnivora, have a short, massive, broad occiput, the foramen magnum being posterior; but the herbivorous Negroes have a long projecting occiput.

Camper's facial angles demonstrate that the forehead is more receding and the teeth more projecting in men than in brutes, and that the *beau ideal* has a greater projection of forehead than common men. But this is only a very limited criterion, as it does not inform us regarding the breadth of head, position of ear, size of jaws, and projection of malar bones and zygomata.

Blumenbach's method, or "normal rule," is but a different application of the above rule to determine the projection of

the jaws beyond the line of the forehead. But this is also a very limited and unreliable method, as it tells us nothing of the general development and shape of the facial and cranial bones, and of their relative size, position of the ear, foramen magnum, etc.

The internal capacity of the skull is also a very uncertain estimate, when taken by itself. The size and projection of the mastoid process is very variable, and the cranial arch should be measured from the external *meatus auditorius;* the length of face should be taken along with the antero-posterior diameter, and the breadth of the malar bones and zygomatic arches taken along with the transverse diameters; the size of jaws in proportion to the cranium observed; the position of the foramen magnum; the breadth and depth of the palatine arch, and the nature of the teeth; the texture and chiseling, so variable in the structure and finish; the comparative *weight* of crania that could be compared, noting the number of teeth absent.

The facial angle, so important to Dr. Morton, does not give the projection of the cheek-bones their breadth in regard to the forehead—a very important point—because some of the finest crania, with small well-chiseled face, have an anterior projection of the superior alveolus, which gives a smaller angle than some brutish skulls in which the face is broad, flat, and the cheek-bones projecting beyond the forehead. The extent and depth of the temporal fossa are very variable, not corresponding with the facial angle, or internal capacity, and, consequently, isolated measurements are worthless as a standard of excellency. The anterior inferior angle of the parietal bone varies in some cases, terminating high where the forehead is broadest, and in others descending into the temporal fossa, where the diameter is narrower. Therefore, Dr. Morton's measurements are not in all cases reliable. All cranial measurements have reference to the anatomy of the brain. How much more satisfactory would it be to saw off the calvarium, and take castings of the interior, instead of filling the skulls with sand, or shot?

In making my classification of crania, according to the natural order, I draw my facts from various sources—from actual examinations and occular surveys of living heads—from examinations, measurements, and drawings, by myself, of skulls in Europe and America—from wholesale and retail hatters' reports, and from dentists' reports in the chief cities of the Union, where there is the greatest opportunity in the

world of studying the different races on a grand scale—and, lastly, from the writings and illustrations of all the great ethnologists: that is, if we can call works great upon a subject which is only breaking the shell. Each ethnologist has made his own favorite, or original, observations and measurements to the exclusion of others. I have taken advantage of their separate labors, and have endeavored to supply a comprehensive view of the comparative physiology of races.

No measurements, however numerous and minute, can supply the place of the actual picture on the artist's eye, which detects a line of difference and the *expression*, which no figures can describe. I have, therefore, depended more upon my sight than upon my compass; and more upon correct drawings than upon correct figures.

I have been in the habit of comparing crania; first, in the general size, proportions, texture, and weight; then each bone separately. Thus I went over Dr. Morton's vast collection, at least fifty times; first, the weight, as I could judge by the hand; then I examined all the nasal bones; then the maxilla, and so on.

The measurements of half a dozen crania of any very inferior race may be taken as a criterion of the national anatomy, because, like the lower animals, they seldom rise above a certain standard, and there is a general uniformity. Not so among the higher races, where, from various causes, the true type of the races is not always reached, and where the masses are inferior to their own *beau ideal*. The higher the point attainable by a race, the greater must be the variety of forms, arrestments of development, and the more numerous, therefore, ought to be the figures, in order to produce anything like a correct statistic. What opinion then can we express of these Anglo-Saxon theorists, who are content to find, by a partial measurement, their own superiority in five or six skulls.

These considerations have deterred me from offering any tables of measurements made by myself, or quotations from others. I believe no two ethnologists have wrought on the same method, nor is there in existence any set of tables of minute cranioscopic measurements, large enough to satisfy a real statistician.

In examining human forms, features, or crania, we must discriminate between the *degree* of development and the *type* of the subject. You may see specimens of cats, poodle-dogs,

and monkeys having the same *degree* of development, but they are at the same time of different types.

So in viewing human crania, we can often find Negroes, Celts, and Goths having the same degree of development—the same *general* proportions of body and limbs, face and head—but they will exhibit, in *some particulars*, the distinctive characteristics of their types. The typical distinctions are most evident, of course, in the contrasts between the herbivora and carnivora, the Negroid and the Gothic, but in comparing either of those extremes with the omnivora, or central Celtic, the distinctions are not so well marked in all cases. One Celtic cranium may be mistaken for a Negroid, both in degree and in type. Another Celtic cranium may pass for a Saxonic, both in degree and in type. The Celtic is only truly Celtic when well developed, that is, when it has a degree of perfection and a typical form different from the Goths, on the one hand, and the thorough African Negro on the other. The student will be disappointed who expects to find an invariable formation or type in any race, whether as regards the general degree of development, or the structure and relative proportion of any given bone. Too much importance, in fact, has been attached to crania. The cartilage, muscles, and skin are as distinctive in race as the bones. The brain would be found a much more invariable and sure indication of type, if careful dissection were extensively made.

As in the general structure, every cranium has its better and worse points, one Negro has a finely arched head over the posterior lobes, but an inferior front, and low degree of face, while you may next see a Celt, or a German, with good face and forehead, but with a narrow or flat coronal region; so it is of every single point—you cannot find any single bone, having any particular and invariable shape, in any race; even in the lower animals, there is considerable variety in the relative size and mode of articulation of the bones. It would be hard to find six dogs', six cats', or six tigers' skulls exactly alike; nor is the skeleton a sure and invariable test of the excellency of the other tissues. Some men with poor heads, heavy jaws, and flat nasals, have magnificent muscular development; others, with fine cranium, and exquisite nerve fibre, present a miserable development of the nasal and aural cartilages, and of muscle. And so of the nervous system contained in the cranium itself; in some, the cerebrum is tremendously developed, not only as regards its

size, relatively to the spinal cord, and cerebro-spinal ganglia, but also in the proportion of gray matter. Every student of anatomy is aware of these common facts; they clearly indicate that measurements embracing only a few crania cannot be relied upon, especially in comparison of the higher Celtic and Germanic races, who have the greatest range and consequent variety of forms.

The osseous structure is the last matured in the animal economy. Generally speaking, the fat has nearly disappeared, and the tissues are deteriorating, before the bones are perfectly developed. Hence, infantile and young skulls afford little, if any, characteristic distinctions of race. The strong contrasts of races can only be observed in the old crania, whereas, youth is the period for comparing the softer tissues. Hence, the common practise of *lumping* together crania, without distinction, is only adopted by those who wish to make out a case.

Whether we examine the heads of the living millions, or the dead few in glass-cases, we observe various degrees of development in each race, the lowest races being the least varied. In the low degrees, there is a general similitude, and a common brotherhood among all the nations. I will first notice this similarity of development, which is a fact altogether apart from the phenomena of *types*. *Animalism* is the common stamp of all inferior skulls of all races, but the *kind* of animalism, carnivorous or herbivorous, marks the peculiarities of race.

I have now to demonstrate the most extraordinary phenomenon in human development, viz.: divergency into the herbivorous and carnivorous forms. In the inferior races, we have simple arrestments, and varieties, chiefly infantile and athletic, or feminine and masculine, but little divergency into herbivorous or carnivorous. In the inferior races, however, there is wide divergence, as well as arrestment. All men belong to the omnivorous stripe, all are capable of living upon a mixed food; the carnivorous Kalmuck may subsist on rice, or the Hindoo may learn to eat raw beefsteak; I believe, however, that the change would not benefit either; races being stereotyped, have their natural food. I call the Goth, or the Kalmuck, or the Kaffre, carnivorous, because they have an organization approximating to the carnivorous animals. I call the Hindoo, and other dark races, herbivorous, because they approximate to the herbivorous organization. The omnivorous is the medium.

In all the collections of crania that I have examined, I see three types in the natural order, herbivorous, carnivorous, and omnivorous. According to the original manner of life, I behold a system of developments which, at first sight, would appear to establish the diversity theory more powerfully than any reasoning dreamt of in modern ethnology; but in a wider and closer examination, I find that the distinct types of human developments have, indeed, analogies to the brutal, but that they are mere arrestments of development—not necessarily primordially distinct species, but degrees of the same specific anatomy. The natural order of development, as I shall expose it, may contribute to prove the unity theory, or the contrary, according to the view we take of it. This is matter of discussion in another place. At present, I have to show that Dr. Nott, and others, have but very confused ideas as to what constitutes a type of man.

I will first compare the skulls of inferior animals; then the brutal with the human; and lastly, the human with each other. In short, I will follow out the same arrangement, I have adopted in the details of comparative anatomy.

There are three radical types of skull in the three strips of animals:—the omnivorous, herbivorous, and carnivorous. This is the division marked out by nature, and all other classifications of animals or men must be imperfect and erroneous.

The distinctive characteristics are not always clearly and strongly defined, the three stripes having many points in common; but yet we shall be able to observe, at the first glance, and upon a general law, very striking peculiarities and contrasts between the herbivora and carnivora, which are carried into the human types.

If the herbivora are inferior in their anatomy to the king of the forest and his carnivorous brethren, then we should expect to find the Negro inferior to the Goth, and the Hindoo below the Kalmuck. But it is not so. Naturalists have issued a scientific error in placing the carnivora foremost.

If the human *beau ideal* of mildness and intelligent power is to be put before treacherous ferocity, and intractable pride, then the lamb should be raised above the lion.

The nearest approach to this natural classification is the arrangement of skulls into, 1—the oval; 2—the prognathous, or lengthened out and narrow, like the Negroid; 3—the pyramidal, or short, like the lowest savage type.

But it has not been observed that the oval belongs to the

Celtic and high omnivorous races; the prognathous to the purely herbivorous inferior races; and the pyramidal to the purely carnivorous races. Nor has it been observed that these three types stand respectively at the head of the three great stripes into which nature has divided animated beings, and that the Gothic anatomy is like the tiger's, and the Negroid like the baboon's. Detached assertions of this nature are to be found here and there, but no one, hitherto, has arranged the types according to their natural developments. Much less has it been shown that the Anglo-Saxon race is carnivorous, and very inferior to the Celtic, as this work will clearly demonstrate.

In some respects, the carnivora appear to exhibit a higher development than the herbivora. Beasts of prey have a shorter muzzle than the horse, sheep, ox, etc. But this superiority is only apparent, and arises from the law of expediency. The carnivorous jaws are shorter to afford greater power, but the sharp teeth, projecting malar bones, and wide zygomata, remove the carnivorous type much below the herbivora. In the herbivora, the jaws have, like the human, a *rotary motion*, and narrower, more slender; the nasal organ is more lengthened, with a greater power of *discrimination* in the senses; and the malar bones and zygomatic arches do not project, as in the carnivora.

The carnivorous skull is flat and broad, the herbivorous is more elevated and narrow. The articulation of the herbivorous jaws is more like the human than the carnivorous. The latter open and shut like a hinge, the former have a lateral grinding motion in addition.

In the carnivora, rotary motion is not requisite, and the head of the lower jaw is broad laterally, and narrow from behind forward, and is closely embraced by its cavity, so as to prevent any lateral or forward movement. In the herbivora, on the contrary, the condyle or head is broad, and the cavity shallow, to admit of rotary movements like the human. This is another anatomical point in which the gentle type surpasses the destructive.

The herbivora have the *antrum* in the superior maxilla, and possess great discriminating faculty of smell. The carnivora have no *antrum Highmorianum*. They have larger olfactory nerves than the herbivora. They have also great power, but no discrimination of smell.

In the carnivorous skull there is a remarkable breadth, and a distinct projection over the ears, where phrenology places

the organs of destruction. This is quite typical, and is totally distinct from the narrow, and more oval brain of the gentle type.

There is a remarkable uniformity in the carnivorous species, which we do not find in the herbivora; the lowest species of the latter are much inferior in many points to the carnivora; but let us compare the herbivorous poodle or shepherd's dog, with the blood-hound or bull dog; or, let us compare the lion with the ourang, and the progressive superiority of the herbivora becomes apparent.

The baboon's jaws are comparatively small and rotary; the alveolar arch is square, and approach to the circular human; the molars are tuberculated; the palate is not so flat as the tiger's; the eyes are close; the malar bones small; and the face small in proportion to the calvarium.

The lowest species and genera, have the largest jaws in proportion to the size of brain. Thus the alligator has immense jaws, the angles of the mouth extending even behind the ears and eyes. In birds, as a general rule, the lowest species have large, long beaks, in comparison with the singing birds. The short, hooked beaks of the predaceous species is formed rather in accordance with the law of *utility* that rules the lower animals, than as a mark of superiority. The parrot, which is omnivorous, inclining to the herbivorous, has the nearest approach to a mammalian structure.

The lowest species of brutes have the longest jaws in proportion to the brain. In varieties of the same species, the superior breed of horse, dog, etc., has the smallest muzzle. Want of chin, is a brutal characteristic, particularly when the jaw is wide, angular, and very massive.

The zygomatic arch of carnivora is very wide and long, and declining anteriorly in a range with the canine teeth, thus affording the greatest power for the masseter muscles. This arrangement gives that forward prominence to the cheek-bone, so peculiar in the tiger as well as in the savage. This is a very distinctive peculiarity of this type.

Some brutes have a small orbit in proportion to the size of skull, as the bear, pig, elephant, rhinoceros, etc.; others have a very large orbit, as the tiger, cat, the hare, the deer, and animals that require quick and sharp vision. But, in all cases, whether among the herbivorous or carnivorous brutes, or whether the orbit be large or small, the face is flat, and the orbit, consequently, shallow.

In general, and especially in the carnivora, the malar

bones project in front of the calvarium, so that the forehead is quite behind the face. In the higher species of animals, especially the dog and monkey, the frontal bones are more nearly on a level with the cheek-bones, thus approaching more to the human.

Let the student remember that the most brutal formation in inferior races is the *projection* of the facial bones, and the large size of the jaws. The carnivora are distinguished by the greater projection of the cheek-bones, and the enormous width of the zygomata.

Large heavy jaws, without chin, is then the most obvious and invariable characteristic of the brute. A far more important, but not so striking a peculiarity, is the want of salience, prominence, individual development in the bones and features of the face; all are locked and smoothed into each other, like a piece of plain woodwork. There is no distinct separation or indentation between the frontal and nasal bones, nor between these and the maxillæ and malar bones.

Perhaps the most remarkable formation has yet to be noticed—namely, the junction of the head to the spine. In fishes, reptiles, birds, and the lowest mammalia, the cranium projects, with the mouth and ear almost on a straight line with the vertebræ. But, in ascending the scale, we find that the cranium is brought more and more towards a right angle, until, in man, a line from the mouth to the ear cuts right across the vertebræ, so that, in man, the head is horizontal; in the baboon, it is placed at an angle of thirty-seven degrees; in the horse, etc., it is vertical. In inferior races the head is not so horizontally poised as in the highest type. In the brute, the head hangs from the end of the vertebræ, so that there is no back of head, no occiput. The human, especially the female head is balanced on the top of the spine, so that there is nearly as much weight of brain behind as in front.

The *foramen magnum*, or large opening were the spine is joined to the skull, is quite at the back of the brute's head, while in the human high type it is *under* the skull. The position of this opening, then, is very important, as, determining the hight of development, we shall find that the foramen magnum, in inferior types of men, is placed far back; there is little or no projection of brain behind, the head and neck forming almost a straight line.

The lower species of brutes have great width between the

eyes. The herbivorous monkey and baboon resemble the human in the closeness of the eyes. The fœtus, at an early stage has the eyes wide apart; the lowest types of men retain this peculiarity.

The inferior types of men have these brutal characteristics. Large jaws and bones of face, in proportion to the brain and calvarium; the bones of the face are not salient, prominent, chiseled, and well-demarkated from each other and from the bones of the head; the forehead does not project, but forms a straight line with the nose, in most instances; and, in all cases, the forehead and cheeks are nearly on a level, as in the brute. This I call shallowness of the orbit, and flatness of face. In some cases, the orbit is small, and the eyes sunken; in others, the orbits are wide, and the eyes large; but, in either instance, the orbit is shallow, and the face flat, because the facial bones are large and prominent.

In examining a skull, we must note, as the most important point, the development of the facial bones, and their size relative to the cranium. We must, therefore, consider the three grand divisions of regions of the skull: 1. The facial. 2. The basilar, or base of the skull, extending across between the ears, and to the temples in front, and the *occiput* behind, this region containing the ganglia of animal life, and, with the facial bones, gives the key to the abdomen and chest, and the sensual and motor temperaments. 3. The coronal, or intellectual region, which includes the length, breadth, and hight of the cerebrum, which is divided into the frontal lobe, the middle or coronal lobe, and the posterior lobe.

The *frontal lobe* rises above the *temples*, the *coronal lobe* above the *base*, and the posterior lobe above and behind the occiput, which is occupied by the cerebellum.

It is an error, very common, to confound the occiput, the seat of the *cerebellum*, and posterior basilar region, with the higher region of the posterior lobe of the *cerebrum*, at the top and back part of the head. This is a moral, intellectual region, whereas the occiput is sensual and animal.

In the lower mammalia, the front lobes and little of the middle lobes are visible. In the higher species, the middle lobes are developed, more or less; but little or no appearance of posterior lobes, until we arrive at the monkey tribe. In the ourang-outang, the cerebrum preponderates so much as almost to cover the cerebellum.

The most degraded carnivorous race present this brutal

type of brain, which is deficient in the breadth and hight of the front lobes, and very deficient in the posterior cerebral region. But the development of the basilar region is tremendous, giving a projection in front and behind, and between the ears; the head is, therefore, flat behind, receding in front, and pyramidal at the sides; the measurement carried round above the ears and eyebrows, is much greater than the width round the forehead, higher up.

The high type of female skull, oval and with the posterior cerebral lobes extending backwards, is the most perfect type. It is finely balanced on the spine, and imparts that upward look and undulating motion, so graceful in the walk of woman. The Gothic woman, whose skull is flat posteriorly, and who have a more muscular neck than the Celtic female, carry the head stiff and the face perpendicular, instead of being turned gently upwards.

The oval formation is carried through the face, as well as the cranium. Horizontal sections made across the forehead and face, present the oval becoming more pointed as we descend. In the *beau ideal*, the whole central line of the face, from the root of the hair to the chin, projects remarkably. The temples and cheek-bones being chiseled away. Taking a profile view, we observe that the centre point of the cheek-bone is far back; the forehead, nose, and centre of the face, projects forward.

Anatomists have observed a very remarkable difference in the three types of skull, in regard to the position of the cerebellum. In the *oval*, or Celtic skull, the cerebellum is placed obliquely, giving a medium development of occiput, but still overlayed by the cerebrum. In the *prognathous*, or Negroid skull, the cerebellum is placed horizontally, and completely under the posterior lobe, which projects behind. In the *pyramidal* skull, on the contrary, the cerebellum is placed vertically, completely behind and encroaching up upon the posterior lobe, which consequently does not overlay the cerebellum, as in the other types.

This is a very remarkable distinction, because it shows that the Gothic skull is filled chiefly by the basilar ganglia, which swell out laterally and posteriorly; while, on the contrary, the basilar ganglia occupy a small space in comparision with the cerebrum in the oval Celtic skull. Therefore, the mere measurement of the internal capacity of the Celtic and Gothic crania, proves nothing in regard to comparative intellect. The occipital projection of the Negro is not on a

level with the ears, but is caused by the extension of the cerebrum—while the broad projecting occiput of the pyramidal Gothic skull, between and behind the ears, is caused by the vertical animalized position of the cerebellum. This phrenological fact accords with the respective characters of these races; the Goth being brutal, stupid, and infanticidal; while the Negro is amiable, docile, and full of the emotional and domestic affections.

What is animalism? We have seen that it is the predominance of the lower developments; the nutritive; the locomotive; the organs of sensation. In other words, the largeness of the mouth and jaws; the protrusion of the foramen magnum, or spine-junction; the protrusion of the ears and of the lower edge of the orbit; and the consequent smallness of the calvarium. Daubenton's estimate of the position of the spine-junction; Camper's facial angle; Blumenbach's normal rule, etc.; all illustrate this fact, that, in the animal skull, with low contracted crown, the passages of the head, of mouth, nose, eyes, ears, and spine, are thrown out, and the edges uppermost, or nearest the crown, drawn back. Thus, the orbits in our *beau ideal*, have the upper edge thrown forward by the protrusion of the brain; in the animal it is drawn back and back, until in the lowest they are almost horizontal; the cheek-bones being left protruding anteriorly and laterally. In the inferior skull, the passages are not only protruding and large in respect to the calvarium or brain case, but they are large in comparison with the bones themselves. The outlet of the animal pelvis is large, in proporton to the extension of the illii or haunches. In like manner, the palatine and dental arches are large in proportion to the jaws; the jaws of our *beau ideal* are relatively small to the head, and the mouth is relatively small and retracted in proportion to the jaws. In the lowest races, the nasal passages and orbits are large in proportion to the bones that surround them; the frontal and nasals particularly. In the pyramidal skull, also, as in the lower animals, the greatest breadth of head is between the ears; lastly, the spine-junction is large, protruding and posterior. Inferior skulls are like the lower animals, heavy and composed of thick unchiseled bones rudely put together; the sutures or joinings are angular, and have not that beautiful and intricate dovetailing of the higher types. Thickness and heaviness of bone is not an invariable characteristic of lower animals or of lower races; some Negroes of the gentle type, have thin, light bones.

Grossness is most common among the rude carnivora. The Kaffres, Malays, Red Men, North Germans, Fins. Such are the general characteristics of inferior crania in all races.

RESUMÉ.

The three radical types of skull have these distinctive peculiarities:—

The oval omnivorous, or Celtic cranium, is large in the coronal region, the anterior lobes projecting over the face, the middle lobes projecting over the auditory passage, and the posterior lobes projecting over the occiput; the face is proportionably small and prominent in the centre, the nasal bones being salient, the orbits oval, and the malar bones small and set back; the zygomatic arch and temporal fossa are also small; the whole structure is light, well elaborated, and finely chiseled. These details are of far more importance than the mere internal capacity of the cranium.

The prognathous herbivorous, or Negroid skull, is not so large in proportion to the spine. The anterior and middle lobes do not overlay the face and auditory passage; but the posterior lobes project beyond the cerebellum; the face is large and projecting: the structure is coarse and heavy, and is unelaborated and not chiseled.

The pyramidal carnivorous, or Gothic skull, is most animalized. In the great size of the face, which is also flat and unelaborated; the jaws are heavy; the teeth more inclined to the carnivorous than in the other types; the malar bones, zygomatic arches, and temporal fossæ are enormous, like the carnivorous type of lower animals; the anterior lobes do not project right over the cheek-bones; the middle lobes are narrower at the crown than at the ears; the posterior lobes are quite deficient, this place being encroached upon by the cerebellum. This last is the most invariable and peculiar characteristic of all the Gothic or carnivorous nations—red, yellow, black, or white. This is the most animalized type of skull, the cavity of the cranium being largely filled with the basilar ganglia and cerebella.

Among all the races of all the continents, we observe similarities of development or form up to a certain degree approaching the intellectual. In like manner, we may notice that the tripartite division prevails on all the continents, rising in perfection as they approach the Mediterranean, and varied on the several continents, just as the lower animals are varied.

The Goth, or A'Sassan, is a European variety of the carnivorous type; the Kaffre is an African variety of the same; the Mongol is the Asiatic; the Red Savage is the American; Feegeean is the Polynesian variety of the carnivora. All these have a common character, and resemble each other as much as the bears—white, brown, or black—or as the tigers, panthers, and jaguars resemble each other all over the world. They all have broad, short, flat heads, large jaws, wide cheek-bones, long spine, etc.

The purer forms of herbivora, as well as carnivora, are disappearing from about the Mediterranean, giving way to the omnivorous type; but we see the herbivorous type, with long narrow head, protruding mouth, small jaws, large limbs, and mild temperament, in South and West Europe, in Africa, among the Hindoos of Asia, in Central America, and the ancient race of Peru, and in Polynesia.

The omnivorous, or perfect human type, is originally circumscribed around the Mediterranean, stretching along into Hindostan; beyond this, in Asia, America, Polynesia, or Africa, we scarcely meet with the perfect type, and the races resolve themselves into the two lower types—herbivora and carnivora. These two are most strongly marked in the outer bounds of the world, but feebly near the Mediterranean, where we see less of the tiger, less of the sheep, or monkey, and more of the man.

If we review the great divisions of the earth, we do not perceive that any inferior race forms a centre of a system from which other races radiate, if we except only the Artic type. Here, indeed, is an unique type; and, descending on Europe, Asia, and America, we find an increasing diversity of humanity, as well as of flora and fauna; but, going on still to the extreme south, the human types begin to degenerate, until we come to the Fuegeans, the Bozjermans, the Alforians, essentially the same pyramidal-skulled type as the Artics.

The Artics are, therefore, not the central type. And it is absurd, moreover, to suppose that the Artics were created and nurtured where we find them. (This strongest point of Dr. Agassiz is his weakest.) Neither is any degraded race the central type. But the high perfect type of the Mediterranean, where the three continents join, is the central type, and the most varied. We may observe that this Celtic type is anatomically central, physiologically central, and also philologically central. All the outside races are more purely

carnivorous, or more purely herbivorous, in this anatomy and physiology, and the outer rind of humanity in all directions is the most purely carnivorous, and the most brutified.

This radiating declension in three forms, according to the general law of animal formations in three stripes, is the most pregnant and important fact ever demonstrated in ethnology.

Here is a central well-spring, a life knot, a tree of life, bearing human fruit, and casting its seed to multiply on the earth. That seed takes root in distant soils, and forms, under new conditions, new centres of new races, which become hereditarily permanent of their kind.

And what is most remarkable, the farther the seed is borne away, and the oftener it undergoes transplantation from the original native soil, the weaker it becomes; producing races huge and lumpish, deformed and dwarfish, with undeveloped brains, stunted or monstrous features, and savage and childish intellects. Behold the aborigines in North Europe, in the North and far East of Asia, in Africa, in America, in Australia, the most distant being the most degenerate seed—seed so inherently weak that it cannot be restored, and must perish and give way to fresh seed, from the high central race imported *direct*—without repeated transplantations from the original mother earth.

Peculiarities of race are nothing but evidence of degeneracy, permanent arrestments of development of a carnivorous or herbivorous type, according to circumstances, and they are low in proportion to their original distance from the Mediterranean. Taking the true Tolticans as an ethnological and geographical centre, we observe—though less strikingly—the same system of increasing degeneracy into North and South America. Taking the true Polynesian as another centre, we observe the same system repeated on a still lower scale. The races of the Pacific degenerating into Australia and the Indian Archipelago.

Here are three great realms of races, within these, in Europe, Asia, Africa, America, and the Pacific, we may observe lesser centres, or groups of races. This great formation, extending from Celtica, may be compared to a process of crystallization, wherein the central and first formations are most perfect and beautiful—the outer and last formed crystals being less perfect, and more amorphous. The other lower systems or groups form, as it were, secondary centres of crystallization around the first.

In this, there is not an unbroken, but only a general grada-

tion, or thinning off in this tree of life; the outer rind is the coarsest, the outer branches the weakest, and least vital, the outer crystals are the least coherent, regular, and beautiful; or, if you will, we may state the facts thus—the human world is composed of realms, one mediterranean, nursing the original tree, bearing the loveliest flowers, and producing the finest fruits; each of the other realms bears a slip of the old tree, transplanted and grown into a tree, with its branches, and the great tree of each realm is weaker and coarser the farther it has been transplanted; but, being transplanted, its new growth or type is permanent. But the old tree still grows on, and increases, and casts its branches over the earth, killing out the weaker trees—in other words, the original old race is encroaching upon all other races.

These are the facts, explain them according to unity, or diversity, as you will.

ART. III.—*Case of Ligature of the Common Iliac Artery for Aneurism of the External Iliac.* By W. H. VAN BUREN, M.D., Prof. Anat. University of New York, Surgeon of N. Y. Hospital, St. Vincent's Hospital, etc.

Mr. J. C., the subject of the operation which I am about to describe, was first seen by me, professionally, in May, 1853. He had come to this city from Canada, for the purpose of seeking advice for a large tumor of the right groin, which was growing rapidly. On examination, I found the tumor to be an aneurism, pulsating strongly and expansively in every direction. It had been first noticed about four years before, and had been steadily increasing in size to the present time—of late, more rapidly, always presenting strong pulsations, synchronous with those of the heart. The tumor was now about the size of an ordinary child's head at birth, somewhat flattened upon its surface, occupying the fold of the groin, and extending upwards along the course of the external iliac artery, beneath Poupart's ligament, the position of which was marked by a depressed line dividing the convex surface of the tumor into two equal halves. Its bulk was diminished very considerably by pressing the external iliac artery against the brim of the pelvis, and its pulsations were entirely checked by the pressure. The patient's abdomen was very fat, and continued pressure caused so much pain that I could not satisfy myself that the contents of the

tumor were entirely fluid, but, from its rapid diminution, and also from its well-marked expansive pulsations, I concluded that it contained but a small proportion of coagulum. When the ear was applied to the tumor, a moderately distant bellows murmur was perceptible. When first recognized by the patient, four years before, the tumor was about the size of a hickory nut, and it lay over the course of the main artery, immediately below Poupart's ligament. The disease, as far as I could learn, was spontaneous in its origin. The patient could recal to mind no injury which might have caused it. He had never had syphilis, nor been subjected to the action of mercury. His heart was sound, and no aneurismal disease could be detected elsewhere. His age was forty-six; unmarried; a member of one of the learned professions, and of irregular habits, addicted to the inordinate use of tobacco and stimulants; latterly also of opium. He was obese in his person, and possessed very little moral courage, as the history of his case will prove.

I explained to the patient the nature of his disease, and recommended him to submit to a surgical operation, with as little delay as possible, as the best means of cure. He then told me that he had already received this opinion from an eminent surgeon of this city, whom he had consulted, and who was about to perform the operation just advised. On learning this, I declined taking charge of his case, and urged him to place himself again under the care of the gentleman whom he had at first consulted, and to submit to the operation. He promised to do this, and I communicated the circumstance to his surgeon. Some weeks afterwards, I was informed by him that our patient had left the city, having been unable to summon the courage required to submit to the operation.

Early in the month of September following, I was again summoned to visit Mr. C., and found him returned to the city in great distress of mind, with his aneurismal tumor fully double the size it presented on my first examination, and very anxious to be immediately subjected to the operation. His surgeon was duly informed of his determination, and everything was prepared to operate in a day or two, when he again changed his mind, and left his residence and the city suddenly, and without explanation or apology.

A third time I was sent for in urgent haste by our patient, who had taken refuge in St. Vincent's Hospital, late in the month of November. I found him, on this occasion, in a

truly deplorable condition of mind as well as of body. He was urgent to be operated upon immediately, and was full of contrition and apologies for his vacillating conduct heretofore. His aneurism had increased to a fearful size; it was still pulsating furiously; and its contents, as far as I could judge, were yet mainly fluid. Upon the most prominent part of its surface, (above Poupart's ligament, where the great bulk of the tumor now lay,) was a dark colored eschar, larger than a half dollar, and the remainder of its surface presented a dusky livid hue. The limb below was swelled to double its natural size. His pain was constant, and, at times, very severe. Of the actual size of the tumor at this time it was difficult to convey an exact idea. To compare it to the head of a child of six years of age, would certainly not exaggerate its dimensions. The large amount of fat in the abdominal walls rendered its upper limit difficult to define, and the same obstacle prevented me from compressing either the right primitive iliac artery or the aorta sufficiently to arrest its pulsations entirely.

In this desperate condition of affairs, death being liable to take place at any moment from the giving way of the eschar which had already formed upon the surface of the tumor, I resolved to attempt the ligature of the main arterial trunk supplying the tumor, if such a course should be approved by my colleagues. A consultation was accordingly requested, and the operation being considered as offering the only chance of life to the patient, it was performed at once in presence of Drs. Valentine Mott, Power, Murray, A. B. Mott, Finnell, James R. Wood, Isaacs, Geo. T. Elliot, and several students. Chloroform was administered and acted happily. The corpulence of the patient and the size of his tumor rendered the recognition of the usual landmarks a matter of more than ordinary difficulty. A curved incision was made about eight inches in length, commencing above midway between the most prominent point of the iliac crest, and the umbilicus, and terminating below over the situation, as nearly as it could be ascertained, of the external abdominal ring; the convexity of the incision looking downwards and outwards. The tendon of the external oblique muscle was then divided so as to lay open the inguinal canal and expose the spermatic cord. This was traced up to the internal abdominal ring, through which the finger was introduced behind the peritoneum, and, upon the finger, the origins of the internal oblique and transversalis were detatched by the

bistoury from the outer half of Poupart's ligament. Free access and sufficient room being thus gained behind the peritoneum, this membrane was then carefully separated from the tumor upwards and inwards towards the position of the main artery. This vessel was soon brought into view lying upon the brim of the pelvis, and not far below the level of the umbilicus; it was carefully exposed for the space of three-fourths of an inch, and being recognized by the surgeons present as healthy, a strong ligature was readily passed around it and tied, with the result of at once arresting all pulsation in the tumor. Principally in consequence of the facility with which the artery was reached, and also on account of the great depth of the wound, resulting from the size and upward pressure of the tumor, and the amount of fat in the abdominal walls, the artery upon which the ligature was placed was supposed by myself, as well as by the other surgeons present, to be the external iliac near to its origin from the primitive iliac. As the peritoneum was detached from the surface of the tumor, it was pressed carefully, but forcibly, upwards and inwards, together with the mass of small intestines by the hand of an assistant, (Dr. Isaacs,) and this mode of procedure was found preferable to the employment of a broad spatula. As will be seen shortly, the ligature was actually placed upon the primitive iliac artery, just half an inch above its bifurcation into internal and external iliacs, the traction exerted by the huge aneurismal tumor having drawn the vessel slightly downwards from its normal position. The wound was accurately closed by sutures and adhesive straps, and the patient carefully placed in bed before the influence of the anæsthetic was withdrawn. The operation was on the whole well borne; the shock was slight, and reaction immediate and favorable; no vomiting followed; the limb was enveloped in woolen cloths; its temperature was for a few hours somewhat lower than the other, but afterwards it did not vary from that of the rest of the body. It did not rise above the temperature of the sound limb, as often happens after ligature of its main artery.

During forty-eight hours after the operation, the patient did exceedingly well. He took beef-tea, with a moderate amount of morphine, and stimulus, which his usual habits rendered necessary. At the close of the second day he had a chill, succeeded by increased frequency of the pulse and great restlessness; and the tumor, which had subsided to

about one-third of its original size, became exceedingly tender and painful. From this period the patient's strength began to decline, and his restlessness and frequency of pulse to increase until the close of the fourth day, when, in spite of all our efforts to avert the result, he died.

The body was examined the next day with the assistance of Drs. Isaacs and Finnell. The tumor and the parts surrounding it were found to be the seat of inflammation, which had terminated in suppuration. The tumor contained recent coagula, with some layers, slight in thickness, of older date. It involved the external iliac throughout its whole length to within an inch of its bifurcation. The wound had united throughout, except where the ligature was brought out. There was no peritonitis. Death had evidently resulted from the irritative fever which accompanied the development of suppurative inflammation in and around the aneurismal sac. The tissues around the tumor, weakened by long continued stretching and imperfect nutrition, took on inflammation readily, whilst the impaired constitution of the patient was entirely unable to resist its progress, or to undertake the reparation of so extensive an effort at disorganization.

On laying open the arteries in the vicinity of the ligature, every appearance indicated a successful effort at obliteration of the primitive iliac. A firm conical coagulum was found both above and below the ligature; the latter clot being more than half an inch in length and bifurcated—one portion being prolonged into the internal, and the other into the external iliac arteries.

December 5, 1856.

ART. IV.—*Induction of Premature Labor.* By GEORGE T. ELLIOT, JR., M.D., Physician to Bellevue Hospital.

THE *New York Journal of Medicine*, for July, 1856, contains an interesting article by Dr. Nœggerath, on the induction of premature labor by the injection of warm water within the cavity of the uterus. This occurred on the 2nd day of July, 1856, and is believed by Dr. N. to be the first operation of its class performed in this city.

On the 16th of December, 1853, while Resident Physician of the Lying-in Asylum, I induced premature labor with the douche, under the following circumstances:—

Mary Kipple, healthy looking, and apparently well formed, had been twice delivered with the perforator and crotch-

et. Pregnant for the third time, she was brought to Prof. Gilman for advice, and recommended to the Asylum. She was then about seven months gone, and the fœtal heart distinctly audible. The antero-posterior diameter of the brim was much diminished from projection of the promontory and upper part of sacrum; pelvis otherwise normal. Drs. Cock, Beadle, Metcalfe, and T. F. Cock, physicians to the asylum, saw the patient, and they, with Dr. Gilman, concurred in urging the induction of premature labor.

I selected the method recommended by Kiwisch, from previous personal experience of its efficiency in relaxing the rigid os uteri, so often the source of troublesome delay in labor. At. 11 P.M., December 16, 1853, I injected about two gallons of tepid water, in a steady stream, well against the os uteri. The instrument used was the admirable india-rubber syringe, invented by Higginson, of Liverpool, which had been kindly sent to me by Prof. Simpson. The patient was placed on her back, with her nates projecting somewhat over the edge of the bed, and a large tub received the water as it escaped from the vagina. The instrument that I used enabled me to direct the nozzle of the syringe with one hand, and to regulate its action with the other.

December 17, 9 A.M.—The vagina and the os uteri had commenced to relax, though the patient had enjoyed a quiet night's rest, and felt no symptom of approaching labor.

2 P.M.—Repeated the injection, which neither annoyed the patient in anticipation or performance. The os was now softened and the vagina much relaxed, while slight wandering pains around the back and abdomen denoted incipient uterine contraction.

December 18, 2 A.M.—Entering the ward to repeat the injection, I found the patient in bed, unconscious of any symptom of approaching labor; though the os was now dilating very satisfactorily, and the membranes commencing to protrude in a somewhat cylindrical form. At 5 A.M., they ruptured, when the funis prolapsed to the vulva, and the right foot entered the vagina.

The funis was pulsating vigorously; and the arguments used by Dr. Simpson to illustrate the advantages of version in deformities of the pelvic brim, satisfied my mind that the pelvic presentation would rather increase the chances of safety for the child, were it not for the unfortunate complication present.

But the child was larger than I anticipated, (weighing

five pounds two ounces,) and before my best directed efforts could draw the shoulders and head through the contracted brim, all pulsations in the funis had ceased, and no endeavors of mine could resuscitate the boy.

The placenta passed without difficulty, and so little did she suffer from the labor, that Mrs. Kipple left the house surreptitiously a few days after, rather than await the time when she might do so without incurring risk.

In my judgment, the unexpected size of the infant, and the untoward complication of the prolapsed funis alone prevented the birth of a living child; while it is evident that no labor could advance more insidiously, or entail less suffering.

It is interesting to note the closeness with which the phenomena presented simulate those of the most fortunate labor. First, relaxation of the soft parts, with increased secretion; the os then softens, relaxes, and dilates, when the pouch of membranes passes intact into the vagina. The first stage of labor may be said to be accomplished with the least possible inconvenience, and the patient saved in great measure from its attendant sufferings, which are probably productive of more annoyance and anxiety than the severer expulsive efforts which promise speedy relief to the burden.

Reference to reported cases will show that, in many, the commencement of labor was detected by the physician before it was perceptible to the patient, a fact well illustrated in the one reported above; and it is an established fact that the child's risk diminishes in direct ratio to the simplicity of the labor.

At the present day, when the propriety of the operation has been placed beyond a cavil, in those cases where a previous labor has demonstrated a degree of deformity forbidding the passage of an unmutilated child, there remains but the choice of means.

In the *New York Medical Times* for July, 1853, will be found the report of a case where I used the douche to relax and undilatable os, with signal benefit; and, indeed, from the autumn of 1852 to the present time, I have had many opportunities, in hospitals and in private practice, of testing the value of this agent in relaxing a rigid os uteri in the first stage of labor.

The form of the instrument is a question of convenience to the operator. One like Matteson's, or that of Thier's, which can be worked with one hand, presents obvious advantages, and a small nozzle readily moved in the vagina is desirable.

It is essential to the success of the operation that the stream should be directed against the orifice of the os, and that the advantage gained should be followed up by deeper insertions of the nozzle; this practice should not differ in inducing labor, or in relaxing the os.

This was well illustrated in a case of labor where I suggested the use of this method; and the second injection having produced no change, I requested that it might be again tried, when I learned, accidentally, that the management had been confided to the nurse, who barely introduced the nozzle within the vagina. Success followed a proper application.

In the monograph of Dr. Silbert, on this subject, it is stated that Dubois induced premature labor successfully in a woman with three injections. Having to repeat the operation in the same woman, again pregnant, it was repeated eight times without effect, a delay attributable to an inclination forwards of the os, by which the force of the water was spent on the posterior lip. This being recognized, the nozzle of the instrument was so directed as to throw the stream against the orifice of the os, when labor instantly set in. Had the fingers of one hand held the nozzle in position from the first, this accident could not have occurred.

In no case, that I am aware of, where premature labor has been induced according to the method employed with Mrs. K., has it been attended by the result signalized by Dr. Nœggerath in his case, where the water was injected through a catheter introduced between the membranes and the uterine wall to the depth of four inches. After the second injection, "Mrs. M. experienced a very distressing pain in her abdomen, much more so than she did at the former injections. It made such an impression upon her system, that she fell into an almost unconscious state; the pulse sunk suddenly, so as to be scarcely perceptible; her face instantly became purple, and her breathing very much embarrassed. Half an hour later, when she recovered from these symptoms, she was seized with a violent chill, which lasted nearly two hours; this was followed by a feverish condition—general heat, and a pulse of one hundred and thirty in a minute. This alarming state gradually subsided, and a renewed succession of strong uterine contractions commenced."

The injection of *carbonic acid gas* in the vagina, on the principle advocated by Brown-Séquard, that it excites unstriped muscular fibre to contraction, has been added to our

resources of late. The first successful application of the principle is due to Scanzoni. This gentleman has abandoned the practice, which he introduced, of exciting the expulsion of the ovum, through sympathy with irritation of the mammæ.—(*Vide Lond. Lancet*, Nov. 1853, p. 415.) An interesting illustration of this sympathy, by the way, can be found in another part of this number of the Journal.

The following is an abstract of Scanzoni's recent case, condensed from an English journal :—

A very small primipara, aged 26, with deformed pelvis, in the thirty-second to the thirty-fourth week of gestation, was the subject. Outer os uteri fast closed; head floating; fœtal pulse faintly heard.

Two table-spoonfuls of bi-carbonate of soda, in ʒxij of water, were mixed in a quart bottle, and the acid was supplied by a little vinegar. From this bottle a tube passed through a glass speculum into the vagina, and the tube, being surrounded with a cork, retained the gas in the vagina.

First day.—Application for twenty minutes; no change. Second day.—Morning, for twenty-five minutes; evening, thirty minutes. During the injection, prickling in the vagina; during the day, frequent stinging in the region of umbilicus; in the evening, portio vaginalis loosened; stingings renewed during the night. Third day.—Morning and evening, each time half an hour; prickling in the vagina; in the course of the day, the presenting head could be reached; in the night, labor-like pains; and, towards morning, contractions of uterus, which ceased after a time. Fourth day.—Tingling during the thirty minutes of the injection; os, dilating. Noon.—Painful persistent contractions; 6 p.m.—rupture of membranes; 7 p.m.—birth of living child, weighing three pounds; recovery, good.

The readiness with which this agent can be applied, and its simplicity, will recommend its trial; and it will be interesting to know whether the sufferings of labor can be mitigated thereby.

The power of ergot is variously estimated, and some deny its efficacy. Drs. Delafield and Gilman have respectively authorized me to refer to two cases under their own observation, where ergot, and ergot alone, brought on expulsion of the ovum.

In Dr. Delafield's case, there was deformity of the pelvis, demanding craniotomy in her first labor. When about seven months and a half gone in her second pregnancy, Dr.

Delafield brought on the expulsion of an unmutilated, but still-born fœtus, by the administration of ergot.

In the case which came under the cognizance of Dr. Gilman, the ergot had been taken in ten grain doses, frequently repeated during two days, with the effect of procuring abortion.

In *Ranking's Abstract*, No. 8, p. 250, may be found the statistics of five hundred and twenty-four cases in which premature labor had been induced. In forty-five cases ergot was given, and the fate of thirty-eight children noted, of whom twenty-three were born alive, though twelve out of that number died within thirty-six hours.

In fact, the uncertainty of this remedy, and the greatly increased risk to the child, warrant the disfavor with which it is now regarded.

Galvanism is entitled to farther trial. The result would not appear to be much affected by the position of the poles. —*Vide Lond. Lancet*, 1854, Jan., p. 26–27.

Rodenberg recommends the introduction within the cervix of a bougie, promptly withdrawn, and frequently re-introduced. He points to fifteen cases, in fourteen of which the children were born alive; and when the youngest of that number had reached the age of two years, seven of them were known to be alive.—*Gazette Méd.*, 1853, No. 26.

Zuydhoek recommends the introduction of a wax bougie, two or three lines in diameter, between the anterior wall of the uterus and the membranes, and leaving it there for a length of time—a method preferred by Dr. Lehman, of Amsterdam.—*Brit. and For. Med. Chir. Rev.*, April, 1851, p. 546.

Sponge tents were used by Kluge, on the same principle; and, when made of various sizes, well compressed and smeared with ointment, were adopted by Prof. Simpson.—*Gaz. Méd.*, 1852, No. 26. *Braith. Ret.*, *XVII.*, p. 218.

The separation of the membranes, to some extent without rupture, was chiefly advised by Prof. Hamilton, of Edinburgh; while Cohen proposed to attain the same end by the injection into the uterus of about ʒviij. of tar water.

Dr. Nœggerath gives the credit of the idea that premature labor might be induced by intra-uterine injections to Schweighauser, of Strasbourg, and its introduction into practice to Cohen.

It has, perhaps, been more customary to puncture the membranes than to use any other method; nor is the procedure so fatal to the child as might, *a priori*, be anticipated,

since out of one hundred and eighty cases recorded by Hoffman, one hundred and three were born alive. Yet, to diminish the risk to fœtal life, Meissner, of Leipsic, preferred to puncture the membranes at some distance from the os, by means of a stilette, and allow but a small quantity of the water to escape. In 1841, he gives eight cases of success to mother and child.—*Gaz. Méd.* 1852—2.

It would seem, indeed, from a review of the subject, that no plan offers the requisites of safety, simplicity, and celerity, in a greater degree than the douche, unless the use of carbonic acid gas should prove preferable; but the advantages of the douche, in the induction of labor, are small and infrequent, when compared with the assistance to be derived from its powers in relaxing the rigid os and cervix uteri, in lingering labor from this cause.

In the writer's judgment, the following case is an illustration, though by no means a conclusive one, of its value, where copious blood-letting had proved inefficacious.

At one A.M., December 6th, my friend, Dr. H. S. Hewit, requested me to meet him in consultation, and brought me to the bedside of a plethoric, strongly built primipara, aged 34. She was comatose, and breathing stertorously; her face, feet, and ankles œdematous; the blood trickling from a lacerated tongue. She had not exhibited one ray of consciousness from three o'clock in the afternoon; and from that time, convulsions had succeeded each other with about half-hour intervals. No fœtal heart was audible, and vaginal examination disclosed a dry and hot vagina; a long, hard, and undilated cervix, with the uterus at about the sixth or seventh month of gestation. I could, with much force, thrust my finger far enough to be sure that I could detect the membranes, with some portion of a fœtus presenting—perhaps, the head. There was scarcely any urine in the bladder, and that, when drawn off with the catheter, and tested with nitric acid, became completely coagulated.

Dr. Hewit had seen her for the first time, at about nine P.M., and with Dr. Stewart, had withdrawn nearly one quart of blood from her arm, which did not coagulate well; hyd. chlor. mit. ℈j, on back of tongue. On inquiry, we learned that she was reserved in disposition, and much depressed in spirits of late, from domestic trouble; still, our informants could now remember that she had been obliged to lay aside her rings of late, as they had become inconveniently tight—that her face had been noticeably swelled, and that, on the

morning of the 5th, she had suffered greatly from pain in the head; the convulsion came suddenly, without warning to them.

We noticed, in her motions and her convulsions, that the left arm and leg did not stir. Some four hours having elapsed since the blood-letting, without effect on the os; about a gallon of warm water was played against the uterine orifice. Within an hour's time, the vagina became perceptibly relaxed, and the os perceptibly softened. In a short time longer, my finger could reach the membranes with ease; and, more anxious for the patient than the trial of the remedy, punctured the membranes with the stilette, and recognized a breech presentation. In little more than an hour longer, two fingers could pass readily through the cervix. There was not sufficient space left for a blunt hook, but it occurred to me, that a strong wire bent in the form of a hook might be of service. A piece was procured, and bent with strong forceps. The first effort to introduce this failing from the size of the curve, this was now made smaller, and fastening it around the leg of the child, I was gratified to find that it sank into the flesh, and would allow strong traction without slipping; with this, and one finger, the pelvic extremity was withdrawn, and then the remainder of the body extracted. The placenta was taken away entire. The womb contracted nicely, and the woman lost no blood from the vagina. During the removal of the child, the patient had one convulsion, in which she raised the left arm; but, while injecting the water, and while delivering her, she was placed in the ordinary position for the forceps, with her feet confided, separately, to women—and at neither time did she move the left leg, though she used the other with considerable force.

No return to consciousness took place; blisters were applied to temples and the nape of the neck, but at about ten A.M., she died in a convulsion, after twenty hours of unconsciousness. No post mortem allowed.

43 West Thirty-Second Street.

ART. V.—*On the Value of the Red Line of the Gum in the Diagnosis of Phthisis.* By D. D. SAUNDERS, M.D., and JOHN C. DRAPER, M.D., Bellevue Hospital, N. Y.

DR. THOMPSON, in his work on pulmonary consumption, in speaking of this red line says, "Considerable attention to this inquiry has impressed me with the conviction of the frequent existence, in consumptive subjects, of a mark at the reflected edge of the gums, usually deeper in color, than the adjoining surface, and producing a festooned appearance, by the accuracy with which it corresponds with the curve of the gingival border; this mark is in some patients a mere streak, in others, a margin, sometimes more than a line in breadth. In the most decided cases, this margin is of a vermillion tint, inclining to lake. As a general rule, the line is most distinct round the incisor teeth, but it is frequently apparent also round the molars. I am not without a suspicion that the form of the mouth influences the direction in which the margin is most obvious; patients with a long upper lip applied closely over the jaw, often presenting around the incisors either no line, or one only slightly marked, while around the canine teeth this margin is well delineated. In toothless individuals, when the gums smoothly cover the sockets, no mark is observable, but when imperfect stumps remaining prevent the smooth adjustment of the surface, the streak is found."

The object of the following statistics, is to test the utility of the red line as an element in the diagnosis of phthisis. The four hundred and fifty-one cases, from which they were taken, are all of the patients at present under treatment in the wards of Bellevue Hospital. Table No. 1, is intended to show the frequency of its occurrence, without regard to the disease. The terms used at the head of the table, are *no line*, *slight*, *good*, and *excellent*. The first is used when no trace of a line exists; *slight* is used when the line is faintly marked on three or four gums; *good* is used when the line is pretty well marked on the gums of the upper jaw; *excellent* is used when the line is full, plain, and very marked on all of the gums.

The whole number of cases examined, (four hundred and fifty-one,) in whom the red line existed, is as follows:

TABLE No. I.

No. of cases.	No line.	Slight.	Good.	Excellent.
451	106	96	175	74

Table No. 2 comprises one hundred and sixteen cases of phthisis, in all its stages. Under the head of stages, the numbers 1, 2, 3, are intended to denote the divisions commonly used in describing this disease.

TABLE No. II.

Stages.	No. of cases.	No line.	Slight.	Good.	Excellent.
1	26	7	3	9	7
2	21	4	5	8	4
3	69	17	17	21	14
Total	116	28	25	38	25

From this we find one-fourth of the cases have no line, another fourth have it very slightly developed, leaving one-half in which it is plainly marked. It may also be observed that the stage in which the disease exists, does not have any material influence on the line. Table No. 3 comprises all varieties of disease except phthisis.

TABLE No. III.

	No. of cases.	No line.	Slight.	Good.	Excellent.
	335	78	71	137	49
Total	335	78	71	137	49

In this table we find more than three-quarters of the cases have the line more or less developed, though only a little more than one-half have it well shown. This table would rather leave the impression, that this line occurs in most chronic diseases, as stated by Drs. Thompson and Frederick, oftener than in any other condition, though the following table conflicts with that opinion. Table No. 4 comprises thirty-seven cases of pregnant, and recently delivered women, in whom no pathological lesion existed.

TABLE No. IV.

No. of cases.	No line.	Slight.	Good.	Excellent.
37	5	6	11	15

In the thirty-seven cases, we see the line existing in thirty-two, though only slightly in six. The results of this table deserves some consideration, as it has been stated by most authors who have investigated the subject, that the line is peculiar to chronic blood diseases; this view, however, is not sustained by the above table, as no disease existed in any of the thirty-seven. It should be remarked, also, that the line occurs more frequently and is better marked in the pregnant woman than in any cases examined. The number of cases at our command will not justify a conclusion; yet they may serve as a basis of further investigation. The

question might be asked—May not this line be considered in connection with the other symptoms of pregnancy?

Table No. 5 comprises thirty-two cases of uterine disease, and is intended to show the difference between the physiological and pathological conditions of the uterus.

TABLE No. V.

No. of cases.	No line.	Slight.	Good.	Excellent.
32	14	7	10	1

In the thirty-two cases examined, there were nearly one-half where the line did not exist, and only one-third in whom it was pretty well marked. It may be observed that there is considerable difference between tables No. 4 and 5, the line occurring nearly in an increased ratio in the two conditions of the uterus, being only very well marked in a single instance when the organ is diseased.

Table No. 6 is intended to demonstrate the influence of sex on the line.

TABLE No. VI.

	No. of cases.	No line.	Slight.	Good.	Excellent.
Female.....	234	57	55	80	42
Male.....	217	49	41	95	32

From this we see no marked difference in the frequency of its recurrence in the different sexes.

Table No. 7 shows the influence of age.

TABLE No. VII.

Age.	No. of cases.	No line.	Slight.	Good.	Excellent.
below 20	48	21	9	10	8
20 to 30	185	38	37	80	30
30 to 60	199	42	44	78	35
above 60	19	5	6	7	1
Total	451	106	96	175	74

Age exerts no influence on the occurrence of the line.

The following general conclusions may be drawn from the above statistics.

1. The red line, though it occurs frequently in phthisis and chronic blood diseases, is by no means characteristic of them.

2. In pregnant and recently delivered women, the line occurs more frequently and better marked than in any cases examined, and may, perhaps, deserve consideration in connection with that condition.

3. That age or sex exercise no influence on the existence of the line.

ART. VI. -- *Reports of the Practice of the New York, Bellevue, and Brooklyn Hospitals.*

NEW YORK HOSPITAL.

Historical Sketch of the Hospital.—The charter of the New York Hospital was granted by the Earl of Dunmore, Governor and Commander-in-Chief of the province of New York, on the 13th of June, 1771; some respectable and public-spirited inhabitants of the city having, the year before, subscribed considerable sums, for the purpose of establishing an institution of this kind. The credit of its origin is due to Dr. Samuel Bard, who is to be regarded not only as the principal founder of the hospital, but also of the system of medical instruction in this state, and by whom, together with Drs. Peter Middleton and John Jones, a petition was first presented for a charter of incorporation.

Contributions to this object were also made by many inhabitants of London, and other places in Great Britain. In 1772, the legislature of the province of New York granted an annual allowance of £800, ($2,000,) in its aid, for twenty years. Five acres of ground were purchased, in 1773, for the erection of a suitable edifice, and the foundation of a building was laid on the 27th of July, 1773; but on the 28th of February, 1775, when it was almost completed, it accidentally took fire, and was nearly consumed. The effects of the war of independence, and the general derangement of affairs, interfered so much with the complete execution of the plan, that the house was not in a proper condition to receive patients until the 3rd of January, 1791, when eighteen were admitted.

Its funds were supplied, from time to time, by grants of money by the legislature of the state, and donations from private citizens, and by the payment of certain sums by the General Government for the board and medicine of seamen, of which class a certain number were constant inmates.

A large and substantial building, erected in 1806, for the purpose of an asylum for insane patients, having been rendered useless by the establishment of the institution for this purpose at Bloomingdale, was remodelled and repaired as a hospital for seamen in 1825, and devoted to that object, under the name of the "Marine Department of the New York Hospital." In 1841, a building, corresponding in general appearance with the marine building, was erected at an expense of about $50,000, on the north side of the hospital grounds. During the same period, a stone out-building was fitted up, for *post mortem* examinations, and for purposes of medical instruction, and also for accommodations for the coroner and his jury, when their services were needed.

The appearance of hospital gangrene in 1849, and the evident tendency to deterioration of the air of the main building, so that the convalescence of patients, after surgical operations, was not so rapid nor so certain as might have been expected, led to extensive arrangements for an entire change in the mode of ventilating and warming that edifice, which were completed in the autumn of 1850, at a cost of

above $50,000. By these measures, a very thorough system for the admission of pure air, by means of lofty external air-shafts on the hospital grounds, was introduced, together with very effective arrangements for draining off the vitiated air. A supply of air, heated by steam-pipes, was provided, capable of raising the temperature of the wards to 68° Fah., at any state of the weather externally, and to keep up such a temperature throughout the severest winter; and other alterations made in the wards, etc., calculated to promote the comfort as well as the health of the patients. These changes were marked by a gratifying change in the improved ratio of cures and diminished proportion of deaths.

The claims for hospital aid, arising from the rapid growth of the city, the immense and continued influx of strangers, and the augmented navigation of the port, now began to increase beyond the means of meeting them, and the Governors determined to substitute for the Marine Hospital a new edifice of the first-class, capable of accommodating at least two hundred patients, or even more, in case of emergency. An appeal for the means of accomplishing this object was made to our citizens, which was so liberally responded to, that, in the beginning of 1853, the necessary arrangements were made for a new spacious three-story stone building on the site of the former Marine Hospital. This was completed and opened in April, 1855, and has probably no superior in its supply of water, baths, water-closets, the hight and spaciousness of its apartments, its ventilation, mode of warming, and all other important points of hospital architecture. The cost of this building, including that of furniture and fixtures of all sorts, amounted to a little more than $140,000.

The buildings of the hospital devoted to patients now consist of three. The principal one, called the *Main Hospital*, is built of gray stone, and extends in front one hundred and twenty-four feet, is fifty feet deep in the centre, and eighty-six feet deep at the wings, which project on each side. It consists of three stories, the hight of the whole above ground being about fifty-two feet, and contains six wards for the sick, in which about one hundred and fifty patients may be comfortably accommodated. This building also contains a theatre for surgical operations, capable of holding about four hundred persons, besides several other rooms for different purposes.

The building denominated the *South Hospital* is also built of gray stone, and extends one hundred and twenty-eight feet from east to west, and ninety feet from north to south, and consists of two projecting wings, and an intermediate or central portion, and will accommodate from two hundred and forty to two hundred and fifty patients, affording each of them not less than one thousand feet of cubic space, and a circulating amount of air when the ventilating apparatus is in operation, of not less than half a mile an hour, and, on an average, probably three or four times that amount.

The *North Hospital*, erected in 1841, stands on the north side of the main building, and is built of blue granite and brown sand-stone. It is ninety-three feet by sixty-three, and three stories high, exclusive of the basement story, and is calculated to accommodate very com-

fortably about one hundred and fifteen patients. The whole buildings will accommodate over five hundred patients.

The care of the patients devolves upon four attending physicians, and six attending surgeons, who visit the wards daily each in his turn, at stated periods, and who perform their services gratuitously. There are two surgical divisions, each under the immediate care of a resident surgeon, always residing in the establishment, and there is also a resident physician always living at the hospital, each of whom has two assistants, and both residents and assistants must have received the degree of M.D., and have been pupils of a practicing physician for three years. They are appointed for eight months each, the next in seniority succeeding on the termination of the eight months, if his conduct and character have appeared satisfactory during their service. These posts are open to all graduates who have been pupils of a practicing physician for three years, the place being assigned to those found on examination by the attending physicians and surgeons, to be the best qualified.

Students, as well as physicians, are permitted to attend the visits of the physicans and surgeons, and to witness the operations, upon presentation of a ticket, which is furnished to them gratuitously by the Superintendant, on presenting evidence of their character and good standing. Clinical remarks are made by the physician and surgeon in attendance during these visits, and also in connection with the different operations performed. Post-mortem examinations are also made in their presence, and different means to render available for instruction the large amount of material afforded by so extensive an institution, thus favorably situated for the treatment of disease and of casualties. There is also a library consisting of more than six thousand volumes, confined entirely to medicine and surgery, and the collateral branches of science specially connected with the healing art, and which contains many splendid and costly works on anatomy and natural history.

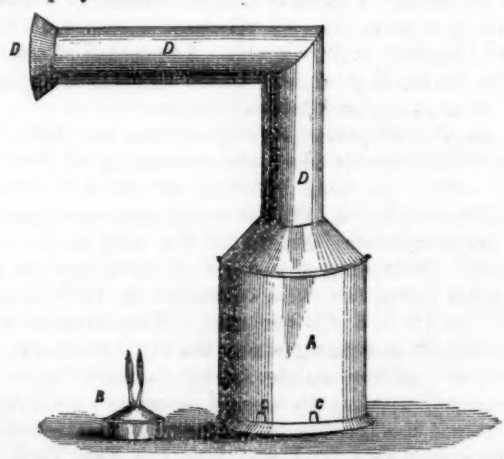
The whole number of patients received into the hospital from the 1st February, 1792, shortly after the re-opening of the Hospital, to 1st January, 1856, has been 106,111, of whom 77,390 discharged *cured*, and 4,768 as *relieved*. Of the whole number, 10,983 have died, including a large number brought to the hospital in a dying state from casualties. Deducting the cases of casualties in persons who died within a few hours, the ratio of deaths in 1853, was $5\frac{57}{100}$; in 1854, $5\frac{85}{100}$; in 1855, $5\frac{70}{100}$ per cent. The number of admissions have been gradually increasing since the institution was opened, and during the 5 years ending on the 1st of January, 1856, there were 16,948 admissions, making an annual average of nearly 4,000 patients who received the benefits of the hospital in those years.

We have furnished this brief sketch of the New York Hospital for the benefit of our distant readers, who may thus be enabled to form some idea of *a part* of the advantages afforded by our city for clinical instruction, advantages we fear not fully appreciated by some of our brethren residing in our midst. From this and other large hospitals here, we hope to be able to furnish matter of both interest and value from time to time, and to show that all our advantages are not suffered to pass without improvement, and that some at least are willing to

share with others the experience they are gaining from their connection with them.*

Cases of Albuminuria treated at the New York Hospital during the three years ending November 1, 1856. By OSCAR G. SMITH, M.D., late Resident Physician of the Hospital.

THE following cases of albuminuria occurred at the New York Hospital during the three years ending November 1, 1856, and include those of mere congestion of the kidneys, those known under the name of desquamative nephritis, and the more severe forms of disease classed under the head of Bright's disease, and comprise, also, those which were unsuccessful in their result, as well as those which terminated more favorably. All the cases were accompanied by general dropsy, which commenced, in by far the greater proportion of cases, in the lower extremities, and but few were attended with cardiac complications. They were mostly treated according to the diaphoretic plan, the effects of which mode of treatment, in the different forms of albuminous urine, it is the more especial design of this paper to record. The means used to promote diaphoresis were the internal use of spiritus mindereri, in combination with ipecac., usually half an ounce of the former, and half a grain of the latter, three or four times a day; and the external use of the hot-vapor bath, three or four times a day, for the space of from a quarter to half an hour; the object of this plan being to relieve the kidneys by free action upon the skin, a plan more rational and usually more successful in its results than that in which diuretics are employed.



The apparatus used for applying the hot-vapor bath, and which may be employed, as it frequently is in the hospital, for producing warmth in the shortest time possible in the stage of collapse from different causes, is, at the same time, simple in its construction and easy in its management, as may be seen from the accompanying cut.

* We are indebted for the above sketch of the hospital, to a short history of it recently prepared by Julian C. Verplanck, Esq., one of the Board of Governors, by which it has been published.

It consists of a large canister, or cone-shaped vessel (A), without a bottom, in order that the spirit-lamp (B), placed within it, may rest on the floor to heat the cold air entering by apertures (C C) in the sides of the canister, near the bottom. The heated air naturally ascends to the pipe (D D), and is conveyed along under the bed-clothes about the patient, establishing any degree of heat sufficient to bring about perspiration of skin. The apparatus is constructed of tin, and applied by placing the lamp within it, upon the floor beside the bed, while the mouth-piece of the pipe (D) is under the bed-clothes of the patient.

The introduction and prosecution of this mode of treatment in the New York Hospital was by the late Dr. Swett, aided by the co-operation and services of the then house physicians, Drs. Swift and Chapin.

Case 1.—The first case presented is, what might be called, a type case. (Dr. Metcalfe in attendance). The patient was a girl about 16 years of age, single, who had menstruated, and who was received into the hospital on account of an attack of convulsions, followed by insensibility. She was first seen at her home, when she lay comatose, pale, eyes closed, and surface cool. Her friends informed us that she had passed very little urine then, and had had two convulsions within four days, of an epileptic character; her tongue had been bitten and swollen. She was removed to the hospital on the same day, March 23, 1855, and the next day had regained her sensibility. Her account was, that she had had an attack of rheumatism the autumn previous, and, on recovering from it, first noticed œdema of feet and legs. This, however, did not prevent her going about, nor distress her much until the latter part of February (the month before coming to the hospital), when she felt pain in her legs, and distress from their swelling; she also had pain in "the small of her back." She never had suffered in a similar way, and never had had convulsions before; complains of pain in back still, and has a general feeling of languor and uneasiness. There is present some puffiness of face. Appearance decidedly anæmic, or, what might be styled with a good deal of correctness, albuminous. No abnormal sound of heart; lungs clear; passes urine; bowels open; skin, dryer than natural.

March 24. On an examination of her urine by the microscope, it was found to contain fibrinous casts and epithelial cells; its specific gravity was 1017; it was cloudy, and deposited albumen when tested. She was placed under treatment, and ordered hot-air bath in the usual way, and spts. mind. and ipecac. mist. March 30. Urine contains abundant fat globules and fibrinous casts. Since yesterday, has had a diminished quantity of urine, and some coma, which has passed off to-day; skin becoming moist under the influence of the bath.

We give a table, showing the quantity of urine passed day by day, and the gradual improvement in symptoms until recovery:

Date.	Quantity passed.	Remarks and Notes.	Date.	Quantity passed.	Remarks and Notes.
April 4	44 oz.	of urine in 24 hours.	May 1	58 oz.	Urine rendered a little opaque by heat. Spc. Grav. 1009.
" 8	47 oz.	" Spc.Grav.1017.			
" 12	56 oz.	" The œdema of feet disappearing	" 2	69 oz.	
" 13	48 oz.	Slight pitting on pressure. Spc.Grav.1010.	" 3	75 oz.	
			" 5	54 oz.	Albumen greatly diminished.
" 17	56 oz.	Urine still albuminous			
" 18	60 oz.	" Spc. Grav. 1009.	" 10	32 oz.	Patient's general health is rapidly improving under the iron and bark.
" 21	60 oz.	Appearance still anæmic.			
" 23	50 oz.				
" 24	48 oz.	—Quantity decreas'g.			
" 26	54 oz.	Spc. Grav. 1009.	" 14	58 oz.	No dropsy; walks about.
" 28	69 oz.	Largest quantity passed yet.			After this date, the patient continued to rapidly recover, and left the Hospital on the 21st of May.
" 29	56 oz.	Was placed upon additional treatment of tr. cinchona comp. and ferri ammonio cit.			

Case 2.—The next case (Dr. Griscom in attendance), was a seaman, about 30 years old, born in Ireland, who also had convulsions. He had a severe convulsion in the carriage, while being brought to the hospital, and another not long after his admission, when he became quite comatose. He complained of great distress in the head, and pains in the back and loins. His limbs and whole body were enormously distended with the fluid in the cellular tissue. The lungs were œdematous, breathing impeded, and he suffered much discomfort from the general distension. He was admitted on the 21st of May, 1855. May 22. Patient passed but little urine during the night. He is rather comatose, and answers slowly but correctly; states that he first noticed swelling of the legs two months ago. He was obliged to pass his urine frequently, getting up at night. On testing his urine, albumen was detected in it, spec. grav., 1030. Whole lower portions of body and limbs are enormously distended, and the hands and face œdematous also. Quantity of urine passed in twenty-four hours, sixteen ounces. Ordered—pulv. purgans, ʒi, statim; spts. nit. dulc. ʒi doses p.r.n. May 25. Is less comatose; passes urine more freely, twenty-two ounces in twenty-four hours; quantity of albumen large. Placed upon spts. minder., and hot-air-bath. May 29. Thirty ounces of urine passed in a day; spec. grav. 1020. May 31. Distension of legs, thighs, scrotum, cellular tissue of penis and abdomen is enormous; face still œdematous. Hot-air bath continued, and pulv. purgans p.r.n. June 1, 1855. (Dr. J. M. Smith now in attendance.) Passes thirty-six ounces in twenty-four hours; spec. grav. 1020. June 5. Passes fifty-six ounces in twenty-four hours; spec. grav. 1016. June 7. Is improving; œdema of face has subsided, as well as that of the upper extremities; the abdomen, scrotum, penis,

thighs, and feet still swollen; passing seventy ounces of urine in twenty-four hours. Continue treatment. June 11. Seventy-two ounces passed, spec. grav. 1014; the quantity of albumen in the urine diminished. June 14. Urine passed last twenty-four hours sixty ounces. June 22. Urine passed last twenty-four hours forty-four ounces; the quantity has been fluctuating for the past week between thirty, forty, and sixty ounces; the spec. grav., three days ago, was 1013, and on testing the urine, the albumen was found abundant; it was observed to-day, which may be thought worthy of record, that, in the application of the hot-air-bath, if the temperature about the patient be too elevated, diaphoresis will not be produced, but the patient will suffer very much; but on depressing it to the proper degree, perspiration would be poured out profusely, much to his comfort. July 3. Passes forty ounces; spec. grav. 1015; the albumen still abundant; abdomen greatly distended; respiration, thoracic; treatment suspended. Was ordered a diuretic liniment, consisting of tr. scill., tr. digitalis, and lin. sapon. comp., to be applied over the abdomen, and directed to take tr. ferri muriat. internally. July 4. Passed thirty-two ounces in twenty-four hours. July 6. Passed forty-four ounces in twenty-four hours. Ordered—pulv. purgans. July 12. Ordered—iod. potass.; passes forty ounces of urine; no effect of medicine. July 13. Was placed, to-day, upon gallic acid, five grains every four hours. July 14. Considerable distension of the feet, legs, and abdomen; breathing unaffected; patient comfortable; forty-four ounces of urine in twenty-four hours. July 18. To-day the operation of paracentesis abdominis was performed, and fourteen and three-quarter quarts of clear, serous fluid drawn off; had passed thirty-six ounces of urine. July 19. Passed, since yesterday, sixty-nine ounces of urine; the wound opened spontaneously, and eight pints of fluid passed away. July 21. Was ordered pulv. purgans, p.r.n. July 22. Ordered—gallic acid. July 27. Placed again upon tinct. ferri muriat.; is better: passed forty-four ounces of urine in twenty-four hours. July 29. Patient sits up. August 5. Passes forty-two ounces of urine in twenty-four hours; improving. August 8. Is able to travel, and desires to go home to Canada, and left the hospital to-day in a much better condition than on admission, although far from being well; his feet and legs were still œdematous, and albumen existed still in his urine.

Case 3.—The following case shows the comparative results of the diaphoretic and the diuretic treatment, as the patient was subjected to both while in hospital. Entered hospital February 20, 1854 (Dr. Griscom in attendance), F.A.R., æt. 53, mechanic, born in New York. One week before admission complained of pain in the abdomen and slight soreness of the throat, and immediately noticed œdema of the feet and face, which continued until three days ago, when he gave up his work and went to bed; no febrile excitement; urine slightly diminished in quantity; he thought he "had taken cold;" stated that for several years he had been liable to pains in the lumbar region; the pulse was natural; skin, moist and warm; bowels open regularly; there was œdema of feet, face, and abdomen; he had also cough, with dyspnœa, and sonorous rhonci could be heard over the chest, with

mucous rattle at the base of both lungs; countenance is pale; urine of fair color, passing one and a half pints in twenty-four hours, albuminous by heat and nitric acid, spec. grav. 1013; no cardiac complication; was directed to take infus. diosm. crenata, and mist. spts. mind. et ipecac., with baths pro re natâ. March 3. General condition improved; appetite good; skin freely relaxed; œdema of face has subsided, as has also that of feet; effusion, however, still in the abdomen; urine passed is more abundant, about two pints in twenty-four hours. The preceding treatment was now discontinued, and he was placed upon pil. Fothergill (consisting of cal., squills, and digitalis,) and the diuretic decoction of the hospital, (consisting of juniperi bacc., rad. senega, rad. scill. and spts. nit. dulc., with boiling water,) and the hot-air bath application, also, daily. March 10. Since the last date the œdema has been gradually subsiding; the feet still pit on pressure; urine passed in twenty-four hours has reached two pints and a half. Was then directed to take decoction of apocynum cannabinum. March 15. At times had attacks of dyspnœa, for which bleeding from the arm was directed, and which was repeated on the 19th, the dyspnœa becoming greater. March 28. Condition in no way improved; œdema of feet about the same; the abdomen less distended than it has been; the medicine (decoct. apocyn. cannabin.) was suspended on account of its disagreeing with his stomach. By microscopic examination, the urine was found to contain secreting cells, fat globules in considerable quantity, blood corpuscles, and uriniferous tubes; still albuminous; spec. grav. 1013. March 30. Has slight pneumonia of lower portion of right lung; was ordered elaterium, one-quarter of a grain, and a blister to chest. April 1. Has had entire suppression of urine for thirty-six hours, and became comatose, in which state he expired. No autopsy.

Case 4.—A boy, 14 years of age, a native of Scotland, entered hospital, April 21, 1854. (Dr. Sweit in attendance.) He stated that he first noticed swelling of his hands and limbs four weeks before his admission; he continued to go about, but felt feeble, and lost his appetite; he slept well; before his present sickness, does not remember having been ill, neither of having a red eruption or sore throat; urine is high colored, and passes it frequently, often getting up at night for this purpose; has had pain in the small of the back, which is tender on pressure; his whole body, legs, and arms are œdematous now; there is also some effusion into the abdominal cavity, little dyspnœa, mucous rattles at base of both lungs; some cough; pulse, seventy-six and soft; tongue, and skin natural; perspires freely; no evidences of previous disease; albumen found to be abundant in his urine, and its spec. grav. 1017, of acid reaction, and containing "fibrinous casts and kidney cells." Was ordered to have half-a-dozen leeches to the region of the kidneys, and a daily application of the hot-air bath. On next day (April 22), lungs found normal, and the urine containing "cells and casts;" was ordered pulv. ant., grs. iij. every four hours. April 27. By microscopic examination of the urine, it was found full of secreting cells, and crystals of lithic acid. April 28. Ordered—carb. potass. May 2. No

excitement of pulse and skin; the swelling has subsided slightly in his legs, not much in the abdomen. May 4. Directed to take pulv. purgans. May 6. Urine found to contain crystals of lithic acid, fibrinous casts and cells. May 16. Face and abdomen less swelled; has been taking pulv. purgans for the last three or four days. May 19. Microscopic examination of urine shows a tendency in the cells to fatty degeneration; suspended pulv. purgans, and directed to take acet. potass. and acet. ferri. May 26. Examination of urine, again shows fibrinous casts, containing nucleated cells, some of the cells containing fat; patient is kept upon a tonic and diaphoretic course of treatment. Under this treatment he gradually improved until August 25, when, the distressing symptoms having been entirely relieved, and desiring to go home, he was allowed to leave; his urine was found to be still albuminous, but in a very slight degree, spec. grav. 1020.

Case 5.—A female, 17 years of age; born in Ireland; entered hospital February 25, 1854. (Dr. Griscom in attendance.) Two months previous to admission, without any assignable cause, noticed œdema, commencing in the feet, and appearing afterwards in the face, and followed by distension of abdomen; has suffered no pain in back; urine has been high colored, and quantity less than natural; skin, dry; bowels, regular; there was very general anasarca; eyes nearly closed; no tenderness over the loins; urine highly albuminous, spec. grav. 1013; quantity passed in twenty-four hours, one pint and a half; no complication of heart; was placed upon the mist. spts. minder. and ipecac., with hot-air baths. March 1. The dropsy of the abdomen and feet has almost disappeared, it exists still in the face; two days after the administration of the above, free perspiration commenced from whole surface of body, and has continued, with an increase of quantity of urine passed. Was now directed to discontinue the diaphoretic course, and be placed upon infus. diosm. crenata. March 28. Has some diarrhœa, for which she is taking opium and nit. argent.; on microscopical examination of urine, found numerous secreting cells containing some fat, blood corpuscles, and lithic acid crystals; no epithelial cells. March 29. Patient to-day has been rapidly failing; at three P.M. she had an attack of great dyspnœa, and soon died. No autopsy.

The few succeeding brief cases, taken together, show the speedy and certain relief from the disagreeable and often dangerous symptoms attending renal dropsy, by the diaphoretic treatment. Some are undoubtedly what Watson calls "active or febrile dropsy."

Case 6.—An Irish laborer; æt. 30; entered September 29, 1854. (Dr. Bulkley in attendance.) He had not exposed himself in any way to extremes of temperature, had never suffered from dyspnœa or palpitation. He first noticed, two weeks before admission, some œdema of feet, which soon extended up to the body; has felt no pain in the region of the kidneys, and has passed urine naturally; on admission into the hospital his legs, scrotum, and penis were distended with fluid, there was no œdema of face or hands; sounds of heart, normal; skin, warm and moist; pulse, natural; passes about two pints

and a half of urine in twenty-four hours—albuminous. October 1. Was placed upon the hot-air bath to-day. October 11. Urine passed in twenty-four hours, two pints and a half; albuminous, spec. grav. 1021. October 13. Urine passed in twenty-four hours, two pints; perspires freely. October 14. Dropsical effusion has disappeared; no œdema of legs or scrotum. October 17. Passed three pints of urine, spec. grav. 1022. October 26. Symptoms having disappeared, he left the hospital; examination of urine showed no abnormal condition by microscope, no trace of albumen.

Case 7.—A laborer, about 30 years of age; born in Ireland; entered the hospital August 24, 1854. (Dr. Bulkley in attendance.) Has œdema of feet and legs; first noticed commencement of the anasarca in the face three weeks ago, which was a little puffy," and in a day or two had the œdema of feet and legs; he had, two weeks previous, "a check of perspiration," while heated, and was quite unwell for a week succeeding, with general febrile symptoms; after recovering, in some degree, attempted to go to work, at which time he discovered the puffiness of his face; at present has no pain or uneasiness in back, no tenderness there; he passes water frequently at night; urine scanty, spec. grav. 1020, and albuminous; heart, normal; pulse, not excited; skin, not unnaturally dry; bowels regular. Ord.—local blood letting, by cups, over renal region, mist. spts. minder., ipecac. internally, and hot-air baths. September 14. Quantity of urine has gradually increased, from twenty-four to forty-three ounces passed to-day; œdema subsiding; skin perspires well, improving. October 3. Is entirely relieved of symptoms, and left the hospital.

Case 8.—A cartman, 47 years of age; native of Ireland; of large frame and general appearance of good health, entered October 6, 1854. (Dr. Bulkley in attendance.) His feet, legs, scrotum, and penis were very much distended with fluid, and there was also effusion into the abdomen. First noticed œdema of face and hands on rising in the morning, about a month before admission, but attended to his work until three days ago; he observed that the swelling extended from the face down the neck and trunk of his body, over the lower extremities; had some trouble in breathing; never had shortness of breath before, or palpitations; states he has suffered for a number of years from pain in lumbar region; passes urine often, but little at a time; its spec. grav. is 1011, and it is highly albuminous; pulse and respiration normal; rythm and sounds of heart normal. October 8. Has passed twenty-eight ounces of urine since yesterday. Directed to take spts. mind. and ipecac. mist., and hot-air baths to be applied daily. October 10. Has passed fifty-two ounces of urine during last twenty-four hours. October 27. On 13th passed sixty ounces, and on 27th, fifty-six ounces, spec. grav. 1017, and since 13th as high as seventy-four ounces in twenty-four hours. November 2. Passed to-day ninety ounces of urine; yesterday eighty-two ounces; spec. grav. of urine 1016, quantity of albumen decreased. November 5. Discontinued medicine. November 10. Passed sixty ounces, spec. grav. 1013; November 23. Discontinued hot-air bath; spec. grav. 1016; passed

fifty-nine ounces. November 26. Sits up; passed forty-six ounces. December 2. Went out of doors five days ago, and to-day left the hospital relieved.

Case 9.—W. McC., a laborer, æt. 30 years; a native of Ireland; entered the hospital November 17, 1854, suffering from general dropsy. (Dr. J. M. Smith in attendance.) He had an attack of dysentery nine weeks before admission; on recovering, noticed some swelling of the abdomen, succeeded by anasarca of feet, legs, and body generally, for which he had been treated with diuretics, purgatives, etc., until the present time. Before his attack of dysentery, health was tolerably good; had no pain over kidneys; no signs of cardiac disease at present; urine is albuminous by heat and nitric acid; was put upon mist. spts. mind. and ipecac., and application of hot-air bath. November 10. Feet still œdematous; abdomen fluctuates also. November 18. Passed twenty-one ounces of urine since yesterday, spec. grav. 1013. November 20. Spec. grav. 1012; continued treatment until December 13, when he was discharged relieved.

Case 10.—A. F., æt. 30; a native of England; and a ship-carpenter; entered hospital December 21, 1854. (Dr. J. M. Smith in attendance.) His legs, thighs, abdomen, and scrotum, distended with fluid, and there was some puffiness of face and neck; the swelling has appeared for short periods in the legs, during the past three months; his feet, ankles, and legs, were œdematous two weeks before admission, and the swelling extended up the body, but would subside in the feet at night. Eight years ago, in St. John's, Newfoundland, was similarly affected for about a year, the anasarca being greater than at present; was under treatment for three months of that time, with warm baths and sudorifics, which relieved him of his trouble until three months ago. Patient is a strong, robust man, of temperate and steady habits, and of good general health; his urine deposits albumen copiously, by usual tests; its reaction acid, spec. grav. 1022; passes twenty-seven ounces in twenty-four hours; no cardiac complication. The usual diaphoretic treatment was directed. January 1, 1855. Passes thirty-two ounces of urine in twenty-four hours; has passed as high as forty ounces; skin perspiring, condition good. February 1. Spec. grav. of urine now is 1017; passes forty ounces; during the past month has ranged much less, thirty-six and thirty ounces. February 9. Discontinued internal medicine; urine albuminous still. March 5. The hot-air bath discontinued; passes twenty-eight ounces. March 13. Passes forty-eight ounces of urine, spec. grav. 1016, and still albuminous; anasarca has subsided very much; at the end of the month was discharged relieved; albumen was still detected in his urine. The same patient returned again on May 5, 1855, with general anasarca of whole body, and albuminous urine. It appears that, about a fortnight before his readmission, he noticed swelling of feet, legs, and scrotum, again; is passing twenty-six ounces of urine a day; was ordered hot-air bath. July 2. Dropsy decreasing, and almost entirely gone; directed tinct. ferri muriat. August 13. The gravitation of fluid into cellular tissue of legs is persistent when he rises; bandages directed to be applied to them. October 1. Discharged relieved.

The cases that relapse and return are very rare. The preceding is one, and the succeeding another.

Case 11.—H. McC., a laborer; 38 years of age; born in Ireland, entered May 31, 1855. (Attendance of Dr. GRISCOM.) During the past year has had anasarca of legs and feet, and effusion into abdomen; at times the swelling would disappear, and the limbs remain of their natural size for eight or ten days, and then the œdema would again return; face and hands have also been distended with fluid; œdema commenced in feet; passed urine frequently, and had to rise at night for this purpose; albumen is detected in the urine; was placed upon spts. mind., and application of hot-air bath daily; nothing abnormal about heart. June 11. Passes twenty-four ounces of urine in twenty-four hours, spec. grav. 1023. June 15. Passed thirty-six ounces. June 19. Albumen still abundant in the urine, spec. grav. 1027; twenty-seven ounces in twenty-four hours. June 29. Albumen still present, but in less amount; the patient to-day, discharged relieved, but returned, July 28, with considerable œdema of feet and legs; no morbid sound of heart detected; albumen abundant in the urine. August 1. Passes only twelve ounces; was ordered hot-air bath. August 7. Passed sixteen ounces, spec. grav. 1019. August 23. Quantity passed tince last note has ranged from sixteen, eighteen, to twenty ounces daily; patient's aspect is anæmic; was ordered ammonio-citrate of iron and comp. tinct. cinchona. September 2. Passes twenty-three ounces of urine; is now taking tr. fer. muriat., gtt. xv. ter in die. September 16. Anasarca subsided. September 28. Patient better and improving; anasarca has subsided; passes more urine—thirty-six ounces in twenty-four hours; is taking tonics. October 8. Went from the hospital relieved.

Case 12.—D. E., a married female; 29 years of age; entered, May 31, 1855. (Attendance of Dr. J. M. SMITH.) Her feet and legs are œdematous; abdomen somewhat distended with fluid; passes urine frequently, which is found, on testing, highly albuminous; face and hands not œdematous—never have been; never had rheumatism; has always enjoyed good health; habits, regular; she first noticed œdema of feet three weeks ago; had pain in back, etc.; placed upon diaphoretic treatment. July 2. Dropsy has disappeared, but is still pale. Ord.—iron. July 13. Went out relieved.

Case 13.—M. D., a laborer; born in Ireland; 56 years of age; entered May 9, 1855. (Attendance of Dr. GRISCOM.) He first noticed œdema of feet and legs eight days ago, with some puffiness of face and hands at the same time; he "took cold," and had cough with expectoration, six weeks previously, the only illness complained of; not being intemperate, not subject to rheumatism, and never had anasarcous swelling before; no cardiac complication; passes about thirty ounces of urine a day; urinates frequently at night; urine slightly albuminous, its spec. grav. 1012; placed upon diaphoretic treatment. May 12. Quantity of urine passed, has risen to sixty-two ounces in twenty-four hours. May 21. Quantity of urine to-day as high as seventy-two ounces, and on 23rd of May it reached one hundred ounces. June 2.

Quantity has been decreasing lately, being now sixty-eight ounces; spec. grav. 1010; symptoms improving. June 11. No albumen detected in the urine, spec. grav. 1007. Ord.—tr. ferri muriat., from gtt. v. to xx. ter in die. July 19. Went out of hospital entirely relieved.

Case 14.—H. G., æt. 22; native of Germany; letter-carrier; entered hospital Sept. 1, 1855, (Attendance of Dr. Bulkley.) Last spring he exposed himself to wet and cold, after which his legs became anasarcous, and the swelling extended to the scrotum; had had no lumbar pains, and no œdema of face. On admission to the hospital, the legs were moderately œdematous, and face puffy; a moderate quantity of albumen in his urine, the spec. grav. of which was 1023; no cardiac complication; he had been using the ung. hyd. over his body before coming to the hospital, and was salivated profusely; mouth ulcerated, and teeth loose; placed upon diaphoretic medication, etc. September 7. Passes twenty-four ounces of urine a day, spec. grav. 1020; and on 23rd, passed forty-eight ounces. September 25. Passed fifty-two ounces, spec. grav. 1012, and the next day went out relieved.

Case 15.—J. M., æt. 37; born in Ireland; laborer; entered hospital October 26, 1855. (Attendance of Dr. Bulkley.) About eighteen months ago he had an attack of tertian ague. First noticed anasarcous swellings two months ago, about the insteps, succeeded by similar swellings of legs and abdomen. States he never drank liquors to excess, and never had rheumatism; has enjoyed good health, and been occupied in superintending laborers on railroads. On admission complained of no inconvenience from swellings; no evidence of loss of strength; face was puffy, and feet and legs œdematous; no pain referable to renal region; passed water often; bowels regular; tongue natural; skin warm, not perspiring; urine albuminous, spec. grav. 1021; passes thirty ounces a day; no cardiac complication. He was ordered to have wet cups to renal region, to take ʒi pulv. purgans at night, and hot-air-bath thrice daily, and mist. spts. mind. and ipecac., three times daily. November 1. The swelling of feet, legs, and abdomen is rapidly disappearing. Continue treatment of diaphoretics, with addition of tr. ferri muriat. Passes forty-eight ounces urine daily. November 9. Dropsy almost entirely disappeared; albumen still in urine, passes thirty-two ounces a day. December 4. Dropsy entirely left him, and condition good. December 10. Went out entirely relieved.

Case 16.—J. D., æt. 26; born in New York; seaman; entered November 21, 1855. (Attendance of Dr. Smith.) Had an attack, six weeks ago, of intermittent fever, and on recovery, noticed for the first time, œdema of feet and legs; health heretofore generally good; never had rheumatism. On admission, feet, legs, abdomen, and thighs anasarcous; no lumbar pains; no cardiac disease; passes urine frequently at night, passes forty ounces in a day, spec. grav. 1015, and albuminous. Ordered—diaphoretic treatment. December 2. Swellings subsided. December 8. First attempt to-day at sitting up. At present, there is no œdema. Ordered—tinct. of iron. December 24. Went from hospital relieved.

Case 17.—C. P., a waiter; aged 36 years; entered February 8,

1856. (Attendance of Dr. T. F. Cock.) His appearance is pale and anæmic. On 1st January last, first noticed swelling of abdomen, which was followed by œdema of feet and legs; his face began to swell three weeks ago; has generally been well; never had rheumatism; noticed that he was obliged to rise often at night to urinate; no dysuria; no palpitations; no pains referable to back; no abnormal sounds of heart; the feet and scrotum distended with fluid, and legs slightly œdematous; urine pale, frothy, and albuminous; passes twenty-eight ounces in twenty-four hours; no hepatic disease detected. Put under the usual treatment of hot-air-bath and spts. mind., etc. February 11. Passes thirty-six ounces of urine, and on the 18th passed fifty-two ounces, spec. grav. 1019. February 22. No anasarcous swellings. Sits up. March 8. Went from hospital relieved.

Case 18.—C. C., æt. 26; female; single; entered hospital January 14, 1856. (Attendance of Dr. T. F. Cock.) Is suffering from anasarcous swellings of the whole body. Her face, hands, feet, legs, and body are œdematous, which impedes her getting about. She first noticed swelling in her feet three months ago, and had pain in the back, occasional nausea, with head-ache; the œdema extended from feet up legs and body; since the 11th inst. has had œdema of face and hands; never suffered from rheumatism; menstruation regular; sleeps well at night; pulse 72, and rather feeble; respiration perfect; heart normal; tongue clean; appetite good; no nausea; bowels regular; has pains in small of the back; passes urine frequently, notices it especially at night; urine albuminous, passes seventeen ounces in twenty-four hours. Ord.—diaphoretic treatment. January 19. Has passed thirty-eight ounces urine since yesterday, and on January 20 had passed fifty-one ounces. February 5. Has passed fifty-six ounces during last twenty-four hours. February 25. No œdema of feet or face now; was allowed to sit up, but the feet became œdematous; she neglected to confine herself to bed, and the anasarcous swellings became extensive; was again placed upon treatment in usual way. June 1. Dropsy rapidly disappearing, under tr. ferri muriat. and hot-air bath. June 17. Went from hospital relieved.

Case 19.—M. S., æt. 21; German; female; entered hospital July 3, 1856. (Attendance of Dr. Bulkley.) With œdema of feet and legs, of four weeks duration; not referable to any cause; never had similar trouble before; no pain in lumbar region; no cardiac disease; menstruation regular; urine is scanty and albuminous, spec. grav. 1022, passes twenty-eight ounces in twenty-four hours; placed upon usual diaphoretic medication. July 12. Skin acts well under the bath; œdema of legs disappearing. July 25. Passes forty ounces of urine; action of skin less free; œdema diminishing; is under mur. tinct. iron. July 27. Sits up. August 6. Left hospital relieved.

The next case is the first of the cardiac complications. In the table of one hundred cases, reported by Dr. Bright, in 1852, the heart was hypertrophied; thirty-four of these were free from traces of valvular disease, and eleven of the thirty-four had some trouble of the aorta. In twenty-seven of the one hundred no affection of the heart

was detected. Anæmia is generally, and was in all cases, reported in this paper present, a lymphatic temperament predominating. The patient's look *albuminous.* Serous inflammations have not been observed to accompany these cases, more generally, if occurring preceding, and seeming to cause the trouble.

Case 20.—F. O., æt. 37; German; brass-turner; entered May 23, 1854. (Attendance of Dr. Swett.) He was obliged to discontinue working three months ago, on account of the anasarcous swelling and pain in his feet; he complains of no pain about the heart, but has shortness of breath and palpitation, on exertion—going up stairs, etc.; has noticed it three or four years; the œdema has extended from the feet up to his abdomen; no evidence of hypertrophy, but there is a roughness with the second sound of heart; he passes forty-eight ounces of urine in twenty-four hours, spec. grav. 3018, which is albuminous, and contains fibrinous casts. May 26. Discovered a blowing sound over the heart's apex, with first sound of the heart, and over the aortic valves, with second sound of heart; directed to have infus. digitalis, ʒss., potass. bitart., ʒiv., to be preceded by pulv. purgans. June 12. Went from hospital relieved.

Case 21.—C. McM, æt. 34; seaman; born in New York; entered February 27, 1856. (Attendance of Dr. T. F. Cock.) He first noticed œdema of legs about four months ago; thinks it came on after exposure to cold; had a chill and pain in the back; was obliged to urinate frequently at night; has had rheumatism; hands not swollen on admission; never had scarlet fever, nor received any blow over the back. On admission into hospital, skin warm and perspiring; no dyspnœa, but some œdema of face; anasarca of feet and legs; no delirium or convulsion, but has had dizziness, dimness of vision, and headache, at times; bowels regular; passes sixteen ounces of urine in twenty-four hours, which is albuminous, and has acid reaction; a roughened systolic murmur detected over apex. February 29. Passes forty-eight ounces of urine daily; directed to have diaphoretic treatment; hot-air bath; spts. mind. and ipecac. March 1. Passes fifty-six ounces of urine; skin acts well. March 8. Passes fifty-two ounces, spec. grav. 1010; has no œdema of feet. April 14. Has progressed favorably under the diaphoretic treatment, and the anasarca of feet and legs had entirely disappeared; he then sat up, and was about the ward; in a few days some œdema of feet was noticed; he was then placed in bed, and bandages applied, but the whole legs becoming anasarcous, the diaphoretic treatment was resumed. May 7. Ordered to take infus. apocynum cannabn. May 8. The apocynum caused pain in bowels and vomiting, but no purging. May 10. Evacuations watery; medicine nauseates, directed to be suspended. May 17. Bowels quiet; placed upon spts. nit. dulc. and mindereri. May 27. Takes hot-air bath, but without effect; has anasarca of legs still. June 1. Discontinued the bath. June 7. Ordered to take infus. buchu. June 12. Recommenced the bath; urine deposits sediment; his condition is feeble; anasarca general over the body and face. Ordered—support. June 15. Hot-air bath has lost its effect upon the skin; discharges from bowels watery, have

been so several days without diminishing the dropsy materially; passes fourteen ounces of urine daily; some dyspnœa. Ord.—opium. July 4. Diarrhœa continued until the day before yesterday, when it ceased without medicine; swelling of the body reduced; passes forty-eight ounces in twenty-four hours; condition better. August 10. Whole body become very much distended with fluid for past day or two; has dyspnœa; no convulsions. August 11. Died; he had partial suppression of urine; no convulsion; dropsy very great and general; the heart was examined, post mortem, and its aortic valves found to be the seat of calcarious deposit; the kidneys weighed nine ounces, were flabby, and exhibited an enormous fatty degeneration.

Case 22.—J. H. C., æt. 40; Dane; artist; entered hospital September 11, 1855. (Attendance of Dr. Bulkley.) He had enjoyed good health until two years ago, when he was attacked with fever and ague, after which he had rheumatism, followed by cholera; on convalescing from the last, had some remains of rheumatism, with diarrhœa, which was suddenly checked, and he then, for the first, noticed œdema of his limbs; on admission, his legs were œdematous; scrotum somewhat distended, and the abdomen slightly so; the face occasionally puffy; he has noticed pain in renal region heretofore, but has none now, and none on pressure there; urine passed frequently, and is scanty, thickly loaded with albumen; bowels inclined to be free; appetite good; passes eighteen ounces of urine daily, spec. grav. 1008; no cardiac disease. September 14. Put upon the diaphoretic treatment, with tinct. ferr. mur. September 20. One leg punctured by needles; bandages to other leg. September 29. Anasarca diminishing; passes sixty ounces of urine. October 28. The dropsy has disappeared, and the patient is up and about; passes sixty-two ounces daily, spec. grav. 1019. December 4. (Attendance of Dr. J. M. Smith.) Is regaining flesh and strength; no dropsical effusion present. December 24. Had an attack of erysipelatous inflammation of face; urinates eighty, ninety, and one hundred ounces occasionally. January 2. Erysipelas has extended over the face, closed his eyes, enfeebled him greatly, and brought on diarrhœa; passages watery. January 4. Is sinking fast: delirium. January 6. Died. No autopsy.

Case 23.—T. McB., æt. 21; carver and gilder; native of New York; entered the hospital October 27, 1854. (Attendance of Dr. Bulkley.) The whole body, legs, thighs, scrotum, and abdominal cavity were distended very much with fluid, the cellular tissue over the entire trunk pitting on pressure; there was also marked anæmia in the face, which was pale and puffy, and the eyelids œdematous. He first noticed œdema of feet fourteen months before; he had been at work, and, as he supposed, perfectly well, and on rising in the morning found he was unable to draw on his boots; discontinued work, and the œdema continued to extend gradually up the legs, but there was no effusion into the abdomen until two weeks previous; he had had no scarlet rash, no pain referable to the back, no dyspnœa, no cardiac disease detected; has taken only occasional purges; urine deposits albumen copiously, by heat and nitric acid, passes eight ounces

of urine daily, spec. grav. 1022. Ordered—hot-air bath, pulv. ipecac. composit., and tinct. ferri muriat. October 29. Passes twelve ounces in twenty-four hours; and October 31, twenty-two ounces. November 16. Passes twenty-three ounces in twenty-four hours, spec. grav. 1020. Ordered—pulv. purgans. to-night. November 20. Does not perspire freely. Ordered—spts. nit. dulc. November 23. Spec. grav. of urine 1025; discontinued nit. spts. December 1. Urine decreasing, sixteen ounces last twenty-four hours; has diarrhœa; symptoms have not been relieved. December 6. Anasarca of body still present; is failing. December 7. Died at two P.M. No autopsy.

Case 24.—E. T. C., æt. 29; native of New York; hatter; entered hospital August 4, 1856. (Attendance of DR. GRISCOM.) Has enjoyed ordinary good health; was in the hospital in 1848, with an attack of rheumatism; he is now pale; has an anxious countenance; considerable swelling of the limbs and scrotum from fluid. He says he has had, at different times, anasarcous limbs; has had pain in the back for last three or four years, pretty constantly; he has it at present, with nausea and looseness of bowels; urine albuminous, spec. grav. 1007; pulse, natural; skin, moist; sleeps poorly. Ord.—Magendie's solut. of morph. at night, opium for bowels, and the moderate use of hot-air bath. August 9. Appears to be better; anasarca diminishing. August 10. Continues nauseated; bowels still free; discontinued diaphoretic treatment. August 20. Is much enfeebled; diarrhœa not checked. August 21. Had partial suppression of urine, passing but two ounces last twenty-four hours, and died. On post mortem examination, the kidneys were found large, granular, and loaded with fat.

The following, and last case, has been one of the most interesting that has been in the hospital, on account of its clearness, successful treatment, and the definite symptoms of paroxysmal cerebral disturbance and renal congestion, as shown in the headache, referred to the forehead, occiput, and the bloody urine. This case is now in the hospital, convalescing, with not the least remains of anasarca.

Case 25.—J. S., æt. 43; soldier; native of England; entered hospital September 17, 1856. (Attendance of DR. BULKLEY.) He has always enjoyed excellent health; never had scarlet fever or rheumatism, nor any dropsical affection before; some of his relatives have had dropsy, and have died with it. He states that, two weeks before entering the hospital, while laboring on the city wharfs, he drank considerable quantity of iced water, which gave him, at the time, a sensation of chilliness. At about three o'clock in the afternoon was taken with nausea and giddiness of head, and his fellow-workmen immediately noticed œdema of his face coming on; he discontinued work, and, in two days after, observed his feet and legs becoming anasarcous; his urine was of high color; he felt thirsty; appetite failed, and he had some fever. The œdema of his legs extended to the abdomen; had some dyspnœa, but no pains of the back until eight days before admission; he was obliged to rise at night to urinate; before admission had convulsions, with pains in his head, referable to occiput and

frontis, and high colored urine. On admission, was pale and anæmic; the feet, legs, scrotum, and abdomen were distended with fluid; face also puffy; and he was suffering from dyspnœa, so that he was obliged to sit up in bed; bowels, regular; appetite, poor; pulse, good, not excited; urine scanty for preceding week, and containing albumen, spec. grav. 1017, passing sixteen ounces in twenty-four hours; no cardiac disease; no disease of liver detected; lungs are œdematous. During the first night after entering the hospital, had slight convulsions; was comatose, and urine very scanty, which symptoms were relieved by administering spts. nit. dulc.; was placed upon diaphoretic medication next day. September 20. Had local bleeding, by cups and scarification, over the renal region, followed by a continuous poultice; passes nineteen ounces of urine, which is bloody; no fibrinous casts or fat; highly albuminous. September 25. Passes thirty ounces, blood has disappeared from it; continues diaphoretic treatment; skin acts freely under hot-air bath. October 1. Passes forty-eight ounces of urine, spec. grav. 1017; it is bloody again; has pain in the head. Ordered—to be cupped over back, and tinct. ferri. muriat. to be given internally; the anasarca is disappearing; no œdema of lungs. October 10. Had an imperfect relapse; was permitted to sit up, and imprudently went out of doors; the anasarca returned; abdomen became much swelled; there was disturbance of brain, and return of bloody urine; blisters to nape of the neck relieved him; diminution of urine, passed thirty-two ounces the last twenty-four hours. October 12. Passes sixteen ounces; some headache; same remedies continued. October 14. Head clear; passes forty-three ounces. October 16. Under full treatment; passes seventy ounces. October 17. Has some headache; passes eighty ounces, spec. grav. 1010. October 19. Head clear; anasarca disappearing. October 21. Passes one hundred and six ounces. October 22. Passes ninety-three ounces; has again disturbance of head and bloody urine. October 27. Passes ninety-two ounces; urine is only slightly albuminous, milky by heat, spec. grav. 1011; all dropsy disappeared; sits up and walks about, expecting soon to go out of hospital well.

BELLEVUE HOSPITAL.

Report of the Practice of the Second Surgical Division of Bellevue Hospital, for 1856. By Dr. Stephen-Smith, Attending Surgeon.

The Second Surgical Division of Bellevue Hospital comprises six wards, having an aggregate of 94 beds. These are divided between the male and female patients, as follows, viz.: fifty-four males and forty females.

This Division has been in charge, during the past year, of Dr. James R. Wood, John A. Lidell, and Stephen-Smith. From the record of cases kept under their supervision by the assistant surgeons, Drs. F. V. White and J. G. Johnson, the following statistics have been compiled.

FRACTURE OF THE CRANIUM.

Case 1.—*Fracture of the Base of the Cranium, with other severe injuries—Death on eleventh day.*—A. K., æt. 35; native of Ireland; mason by occupation; moderately intemperate habits, but of good constitution; was admitted November 16th, soon after the receipt of the injury.

His injuries were caused by a stone projected from a blast. They consisted of a perfect comminution of the lower maxilla, and a fracture of both superior maxillæ, so extensive and comminuted, that the entire upper jaw could have been easily removed. There was also a penetrating wound of the right shoulder, and a lacerated wound of the scalp.

Stimulants were freely administered, and reaction gradually took place. He was able to swallow liquids freely, and for the first four or five days, improved so much, as to give strong hopes of his recovery. He was able to get up and sit for a considerable portion of the day. During this time pieces of bone were frequently taken from his mouth, separating both from the upper and lower jaws. The superior maxillæ were both loosened throughout their entire extent, as was evident upon traction. The lacerated wounds sloughed, and gave rise to an offensive discharge from the mouth. There were no cerebral symptoms at any time observable, and no paralysis; his mind remaining clear.

On the eight day typhoid symptoms began to appear, and the patient from this time, sunk rapidly, and died on the eleventh day, from the receipt of the injury.

Autopsy.—On examination, the upper and lower maxillæ were found fractured into so many pieces, as scarcely to leave an outline of the original bones. On removing the fragments, it was discovered that the fracture extended upon the left side to the base of the cranium, which was involved in the injury. A piece of bone, nearly an inch in diameter, beneath the middle lobe of the brain, was found entirely loosened from its connections. There were no evidences of the inflammation of the meninges, or the parts adjacent to the fracture.

The penetrating wound of the shoulder was found to involve the joint, causing a compound comminuted fracture of the head and neck of the os brachii, and a fracture of the acromion process.

Case 2.—*Fracture of the Skull—Depression of Bone, with Laceration of the Membranes of the Brain—Trephining—Hernia Cerebri—Death.*—(Reported by JOHN GEORGE JOHNSON, Senior Assistant Surgeon.)—Patrick Welsh was admitted to Bellevue Hospital on Saturday, October 25, for an injury to the head, received while blasting rocks. He was a married man; forty years of age; temperate; of vigorous constitution; and had always enjoyed good health. On the day previous to his admission, he had been struck by a stone from a blast, while at work at the corner of 45th street and 4th avenue. The wound had been treated by a physician before his admission, who had simply approximated the edges of the wound by interrupted sutures. On admission, the sutures were removed, and a clotted mass of blood, hair, and dirt was found; and the wound also contained several inclosed small

gravel stones. On examination the right parietal bone was found to be fractured near the junction of the sagittal and lambdoidal sutures. A small triangular portion was depressed, and the inner table being larger than the outer, it was found impossible to remove it. At this time, thirty hours after the injury, the patient's pulse was sixty-eight, and full; he was very restless, so as to require two men to hold him on the bed, and somewhat delirious; on consultation, it was decided to remove the depressed portion of bone. The operation of trephining was performed by Dr. Stephen-Smith, assisted by Dr. J. R. Wood. After the removal of the depressed portions of bone, the dura mater was found to be lacerated, and some portion of the brain escaped. The wound was lightly dressed.

The effect of the operation was immediately apparent. The patient, before so restless, as to require force to retain him on the bed, soon fell asleep and remained quiet through the night; his pulse was sixty-eight, but softer than before.

Sunday, October 26.—Pulse 68. Patient rational, quiet, everything progressing well.

Monday, October 27.—Pulse 70, with a quicker beat than on the previous day. Patient more restless.

Tuesday 28.—Up to this time the dressings applied immediately after the operation had not been disturbed. These dressings consisted of four sutures, approximating the flaps, together with adhesive strips, and over the whole was placed a compress, held in place by a retaining bandage. This morning, paralysis of the left arm was first noticed and loss of sensation on the outer side of the left leg; but not on the inner side. Nothing abnormal was discovered either in the right arm or right leg. At noon, Dr. Smith removed the dressings, cleansed the wound; and new dressings, adapted to make slight compression, were applied. Soon after this change of dressings, the patient was attacked with convulsions; when all dressings were removed, and a simple poultice applied. The convulsions were limited to the paralyzed side, and continued to recur at intervals of half an hour during the night. The following prescription was directed:—℞ morphiæ sulphatis, antim. et potass. tartratis āā gr. $\frac{1}{16}$. This was repeated every hour.

Wednesday, October 29.—The patient appears rather weaker; convulsions still continue at intervals of half an hour; fungus cerebri begins to protrude beyond the lips of the wound. Slight compression was directed to be made by compress and bandages. The convulsions did not recur during the following night; during the convulsions he retained his senses perfectly; he was aware of their approach and would request his friends to hold his head still, during their continuance.

Thursday, October 30.—Pulse was 68; from four, A.M., till half-past eight, A.M., the time of the morning visit, he had had eight convulsions; still he appeared refreshed with the rest he had had during the previous afternoon and evening, and wished to be allowed to get up and dress himself. Fungus cerebri now protruded from wound about $\frac{3}{4}$ of an inch. The patient remained very comfortable till twelve o'clock, M., of this day, when he commenced having general convulsions. These would

come on every five minutes, or even oftener. The dressings during these, were applied twice a day, with only slight compression, and the wound syringed out during the night. From half-past ten, P.M., to eight, A.M., he had fifty convulsions; at half-past ten, P.M., his pulse was 90.

Friday, October 31.—Pulse 100, and feeble. Patient has always retained his senses—after each convulsion he would reply to questions put to him, would invariably say he felt well, and would always give notice when the convulsions were approaching. The convulsions continued with the same frequency, as during the previous night. Ordered wine, whey, milk punch, and beef tea, *pro re natâ*; dressings to the head, the same as yesterday. The fungus cerebri protruded much more than the previous day. A simple enema was given and his bowels continued in a soluble state.

Saturday, November 1.—The convulsions still continued every three to five minutes, and were general; during these the head was drawn more to the left side than on the previous day. Pulse remained at 86; at eleven o'clock, A.M., the convulsions had entirely ceased; up to this time he has had from two hundred and fifty to three hundred convulsions; the compress and bandages were applied in the afternoon; everything appears favorable; he is somewhat sleepy, and his tongue is somewhat swollen, being badly bitten while in the convulsions.

Sunday, November 2.—Patient's general condition more favorable; no convulsions, fungus has not increased since previous day; pulse 68.

Monday, November 3.—The paralysis of left side, which has continued during the last few days, begins to subside, patient feels when the sole of his left foot is tickled; but has no power of motion.—This paralysis of the left side commenced with the convulsion; pulse still 68.

Wednesday, November 5.—Paralysis has entirely disappeared, and he has control of both left arm and leg.

Thursday, November 6.—Dr. Smith removed the fungus, applied nitrate of silver, and directed wound to be syringed with liquor calcis, and compresses, wet with same, to be continued; pulse 68. Professor A. Clark examined the portion of fungus removed, under the microscope, but no brain substance was found; the fungus consisting of fibrin and hæmatoidin.

Friday, November 7.—Pulse 72, everything favorable, patient anxious to get up and dress.

Saturday, November 8.—Dr. Smith touched fungus with nitrate of silver; dressings reapplied, compression continued.

Sunday, November 9.—Fungus markedly increased, in other respects his condition was favorable.

Monday, November 10.—Dr. Smith removed fungus, some arterial hæmorrhage, which was readily checked with nitrate of silver.

The following lotion was directed to be applied:—℞ acid. nitric. gtts. xx; aqua. ℥i.

The examination of the removed fungus showed that it was similar to the one first removed; none of the substance being brain and con-

sisting only of a granular mass, with a few bloodvessels and blood disks.

Tuesday, November 11.—Purulent discharge continues, and there is some sloughing of fungus. Lotion continued.

Wednesday, November 12.—A small portion of fungus was removed, which was followed by an obstinate hæmorrhage. This was checked by nitrate of silver and cold water lotions; patient seemed relieved by the hæmorrhage; there was some pus discharged; lotion and dressings continued.

Thursday, November 13.—Pulse 70; general condition good; washed wound with weak solution of chloride of soda. Very little of the fungus remaining; none beyond the lips of the wound; all had sloughed. Paralysis of the left arm came on.

Patient continued the same, with no incident of note till

November 26.—Paralysis of left arm still remains; no farther protrusions of fungus cerebri; lotions of nitric acid discontinued, and pulv. cupri sulph. used instead.

Wednesday, November 26.—Patient had a severe chill; no appetite; restless; general condition unfavorable; fungus began again to protrude.

Thursday, November 27.—Still worse; another chill; pulse 68; answers all questions rationally.

Friday, November 28.—Paralysis of the whole of left side; patient still had his senses sufficient to sign an order for money in bank, and to give some few business directions; no convulsions; pulse 68; fungus more prominent, with fœtid discharge. Friday night.—Restless; cold perspiration over whole body; tendency to coma; could be aroused with great difficulty.

Saturday, November 29.—Complete coma; could not swallow; discharge same as previous day, fœtid. At night, involuntary evacuations of bowels.

Sunday, November 30.—Patient died at three P.M., with all symptoms of abscess of brain.

No autopsy could be had, the case having passed into the hands of the coroner, from supposed carelessness of those having charge of the blast, in not giving notice. The coroner delivered the body to the friends, who would not consent to an autopsy.

Remarks.—The length of time which the patient survived such severe injuries, is, perhaps, the most interesting feature in the first case. The injury which the brain sustained by the mere isolation, without displacement, of a button of bone, from the base of the cranium, at the point indicated, was too slight to have given rise to any severe immediate symptoms. The complete comminution of the superior maxillæ was a much more serious complication, and one that would have doubtless led to a fatal issue.

In the second case, we have the unfavorable complication of a hernia cerebri. But two or three facts were observed in the progress of this disease worthy of notice.

The first is as to the nature of the tumor. One class of these growths so strikingly resembles the normal material of the brain, that they have hitherto been supposed to consist of the substance of that organ, protruded through the cranial opening, and hence the name hernia cerebri. The tumor in this instance was twice excised and submitted to microscopical examination. In neither instance was there found to be a trace of the normal constituents of the brain, although, on simple inspection, it closely resembled cerebral substance.

A second fact observed relates to treatment. Excision of the tumor, followed by firm pressure, was productive of no benefit. The tumor seemed, on the contrary, to spring up more rapidly after excision, while pressure, of a degree sufficient to restrain the protrusion, was not tolerated. The tumor was finally allowed to increase without restraint; it soon acquired a large size—and becoming strangulated at its base, sloughed completely off. The general symptoms now began to improve; the patient recovered in a considerable degree the use of his left side, and he wished to get up. Meantime, the surface of the wound improved, the cerebral pulsation was slight, and, for several days, there was no appearance of a return of the disease. Local applications had no apparent beneficial effect.

FRACTURE OF INFERIOR MAXILLA.

Summary.—Number of cases, 11; number of fractures, 13; united, 7; ununited, 5.

Case 1.—*Fracture of Shaft and Ramus; Gutta Percha Dressing—No Union at the end of* 137 *days.*—R. B., aged 45; native of Ireland; laborer; of somewhat intemperate habits, but good constitution; was admitted March 19. He had received his injuries by being thrown violently from a wagon, which came in contact with a railroad car in rapid motion. These consisted of a severe lacerated wound of the lower part of the back and nates, contusions upon various parts of the body, and a double fracture of the lower jaw. Both fractures were oblique, the right being through the body, just anterior to the insertion of the masseter muscle; the left being through the ramus.

Owing to the severity of his injuries, and the supervention of symptoms of prostration and delirium tremens, no dressings were applied to the jaw until April 1, the thirteenth day. A gutta percha splint was then adapted to the jaw, and plugs of the same material placed between the teeth. The decayed and irregular state of his teeth, however, prevented the adjustment of interdental splints, so as to serve any useful purpose.

On the 7th of April there was free arterial hæmorrhage, from the region of the fracture on the right side; about a pint of blood lost; the bleeding ceased spontaneously and never returned.

May 23.—The dressings were removed, but there was no union of the fractures, the central portion of the jaw moving freely. The patient's general condition was still unfavorable, and the dressings were re-applied, so as to retain the fragments as much as possible in

apposition. Discharged about the middle of August, the fractures being still ununited.

Case 2.—*Fracture at Symphysis; dressed with roller and cork. between teeth—Cure, complete in thirty-seven days—No deformity.* —A. R., æt. 40; native of New York; laborer; of good constitution and temperate habits; was admitted September 24. The fracture was produced by a blow, the lesion occurring at the symphysis menti. The four-tailed bandage was employed, with pieces of cork between the teeth. Discharged, October 31, with firm union, and no deformity.

Case 3.—*Compound Comminuted Fracture from a Powder Blast —Removal of Fragments—Death on the eleventh day.*—A. K., æt. 35; native of Ireland; stone-mason; intemperate habits, but good constitution; was admitted November 16. The fracture was caused by a stone from a blast of rock, which struck him in the face. The lower jaw was so comminuted as to have lost its natural shape, the fragments feeling through the integuments like a collection of small irregular pieces of bone. He was so severely injured otherwise, as to require active supporting treatment until his death, which occurred on the eleventh day. Fragments of bone and teeth were removed, from time to time, as they loosened.

Case 4. — *Fracture near Angle, oblique—Barton's bandage— Union, perfect—Discharged on thirty-ninth day.*—M. R., æt. 54; native of Ireland; laborer; intemperate, but of good constitution; was admitted January 7. The fracture was on the left side, near the ramus, oblique, and occurred from a blow upon the underside of the jaw. No complication existed. It was dressed, January 19, with Barton's bandage, having a compress over the point of fracture. Discharged, February 15, with firm union and no deformity.

Case 5.—*Fracture through both Rami—No dressing applied— Union, perfect.*—J. G., æt. 45; native of Ireland; laborer; good constitution; was admitted May 5. The fracture was through the ramus of both sides, and was caused by a fall from a third story while ascending a ladder with a pail of water. There was no apparent displacement, and no dressings were applied. Several days after admission, the patient was attacked with pneumonia, from which he convalesced after a severe illness. Discharged, June 2, with perfect union of the fractures of the jaw.

Case 6.—*Fracture through Body—Barton's dressing—Imperfect Union on the seventeenth day.*—J. O'N., æt. 30; native of Ireland; laborer; good constitution; was admitted nine days after occurrence of fracture. The fracture was through the body of the jaw on the left side, and occurred from a direct blow upon the part. He was treated with Barton's bandage twelve days after admission. Discharged with imperfect union.

Case 7.—*Fracture through Ramus—Gibson's Dressing—Firm Union on twenty-ninth day.*—P. R., æt. 55, native of Ireland,

laborer, good constitution, was admitted two days after receipt of injury. The fracture was through the ramus of the left side, caused by a blow upon the opposite side of the jaw, two days before admission. Gibson's dressing was applied. Discharged twenty-nine days after admission; union firm; no deformity.

Case 8.—*Fracture through Shaft—Cause, a direct blow—Gutta-percha splint—Union, perfect in thirty-five days.*—P. D., æt. 35, native of Ireland, laborer, good constitution, admitted five days after occurrence of fracture. Fracture through the body on the left side, caused by a direct blow, five days before admission. The dressings consisted of an external splint made by moulding gutta percha to the jaw, and interdental splints of the same material. The dressings preserved the parts in accurate apposition for three weeks, when they were removed. They were reapplied, and again removed at the end of a fortnight, when union was found to be firm. The first molar tooth became loosened, and had to be removed. Discharged thirty-four days after admission, with firm union, and slight elevation of the posterior fragment.

Case 9.—*Fracture of Ramus—Union in twenty-three days.*—M. R., æt. 46, native of Maine, good constitution, was admitted one day after injury. The fracture was through the ramus of the right side, and was caused by a direct blow. The patient could close his jaws firmly; there was no displacement; and the fracture could be detected only by opening and closing the mouth. A simple roller dressing was applied, so as to maintain a fixed position of the lower jaw; no interdental splints were used. Discharged twenty-three days after admission, with firm union; no deformity.

Case 10.—*Fracture at Symphysis—Non-Union at end of four months.*—P. C., æt. 36, painter, native of Ireland, good constitution, was admitted two months after the occurrence of the fracture. The fracture was at the symphysis, and was caused by a blow. There was a fistulous opening, through which the probe could be passed from without directly between the fragments, so as to appear in the mouth. The fracture had been treated on Blackwell's Island, from which the patient was discharged for disorderly conduct, six weeks after its occurrence. There was no union on admission to Bellevue Hospital. The gutta percha dressings were applied, but the patient removed them frequently. Discharged nineteen days after admission, without union.

Case 11.—*Fracture of Shaft; Gutta Percha Splint; Results Uncertain.*—J. L., æt. 19, native of Ireland, sailor, intemperate, syphilitic; admitted one day after occurrence of fracture.

The point of fracture was oblique, through the shaft of the left side, near the angle, caused by a direct blow. The gutta percha splint, external and internal, was applied. The fragments were maintained in perfect apposition until the fifth day, when the patient took his discharge. Results of treatment uncertain.

TABLE OF ELEVEN CASES OF FRACTURE OF THE INFERIOR MAXILLA.

NO. SEX. AGE.	CAUSE.	POINT OF FRACTURE.	DRESSINGS.	TREATED.	UNION.
1. M. 45.	Thrown from carriage ..	Shaft of right and ramus of left side.	Gutta percha.	137 d.	None.
2. M. 40.	Blow	Symphysis.	Four-tailed bandage, cork bet. teeth.	37 d.	Firm.
3. M. 35.	Blast of rock	Entire body of jaw comminuted.	None.	Death on 11th d.	None.
4. M. 54.	Blow under the jaw ...	Shaft near angle.	Barton's.	27 d.	Firm.
5. M. 45.	Fall from a ladder....	Ramus of both sides.	None.	29 d.	Firm.
6. M. 30.	Direct blow	Shaft of left side.	Barton's.	12 d.	Firm.
7. M. 55.	Indirect blow	Ramus of left side.	Gibson's.	—	Firm.
8. M. 35.	Direct blow	Shaft of left side.	Gutta percha.	34 d.	Firm.
9. M. 46.	Direct blow	Ramus of right side.	Barton's.	23 d.	Firm.
10. M. 36.	Direct blow	Symphysis.	Gutta percha.	19 d.	None.
11. M. 19.	Direct blow	Shaft of left side.	Gutta percha.	5 d.	None.

REMARKS.—*Sex.*—In this collection of cases the patients were all males. The immunity of females from this accident is obviously due to their employment, which exempts them from the exciting cause, viz., direct injuries.

Age.—The age at which fracture of the lower jaw is most frequent, is the middle period of life, or that during which the individual is most frequently exposed to severe injuries. Age, like sex, has no other exemption from this accident than what appertains to the withdrawal from its exciting causes.

Cause.—In every case but one, the blow or injury was direct. In Case 7, the blow was received upon the opposite side of the jaw from that where the fracture occurred.

Point of Fracture.—In about one half of the cases, the body of the jaw was the seat of fracture. That portion of the shaft most frequently fractured was about the insertion of the anterior border of the masseter muscles. In one case the body of the jaw was perfectly comminuted, and in a second a fracture of the ramus occurred upon the opposite side. Five of the thirteen fractures were through the ramus, and two at the symphysis.

Dressings.—The particular form of dressing employed depended upon the peculiarity of each individual case. Where the fracture occurred through the ramus, the dressings were usually a simple four-tailed bandage, tightly applied, without interdental splints. The patient was allowed to take semi-solid food, but movements of the jaw were restrained as much as possible. Firm union never failed to take place in these cases at an early day.

When the fracture existed at the angle, through the shaft, or at the symphysis of the jaw, the dressings were such as seemed best adapted to keep the fragments in constant apposition. Of those employed the gutta percha, both internal and external, gave the most satisfactory

results. The preparation of this dressing is simple. The external splint is prepared by dipping a sheet of gutta percha in hot water, when it can be readily moulded into the shape required. The form of external splints best adapted to secure the apposition of the fragments was that which embraced the jaw beneath and latterly, with a strip passing around in front, thus enclosing the prominence of the chin. The gutta percha, when treated with hot water, can be readily moulded with the fingers so as to precisely fit the parts as described. When about to be applied, the splint should be lined with a layer of lint or cloth, to avoid the irritation of the skin which this substance might induce. The splint is then adjusted to the jaw and secured by a bandage applied in the usual manner.

The gutta percha, moulded into proper shape, was also introduced between the teeth to serve as interdental splints, and nothing can surpass it in efficiency. Prof. Hamilton, of Buffalo, who, we believe, was the first to employ gutta percha for such purposes, gives the following directions for its preparation:

"Dip a couple of pieces of the gum, of a proper size, into boiling water, and when they are sufficiently softened mould them into wedge-shaped blocks, and, having wrapped each block with a piece of cotton cloth, carry them to their appropriate places between the back teeth. Immediately press up each horizontal ramus of the jaw until the mouth is sufficiently closed, and the line of the inferior margin is straight. In this position retain the fragments a few minutes, until the gum is sufficiently hardened. Meantime it will be practicable, generally, to introduce the fingers into the mouth, and to press the gutta percha latterly on each side towards the teeth, and thus to make its position more secure. When it is sufficiently hardened, remove the splints for the purpose of determining more precisely that they are properly shaped and fitted. The superiority of this splint is now at once perceived. If properly made, it is smooth upon its surface, and not, therefore, so liable to irritate the mouth as wood or cork, and it is so moulded to the teeth that it will never become displaced."*

Results.—The length of time required in the treatment of those fractures depended upon the nature of the fracture and the condition of the patient. Where there was no complication, and the constitution of the patient was good, the union was firm in an average of 27 days. Fracture through the ramus, owing to the slight mobility of the fragments and their more perfect apposition, afforded the best results as to the length of time required for cure. This variety gives a less number of days of treatment, with no instances of non-union. Fracture at the symphysis proved to be slightly less favorable than through the ramus, although the parts are easily maintained in apposition. The cause of non-union in Case 10 was due entirely to the misconduct of the patient, who removed his dressings whenever he ate. He was discharged from the hospital for disorderly conduct.

The number of cases of non-union is unusually large. The causes of non-union were all referable to the condition of the patient. In

* *Trans. Am. Med. Assoc.*, Vol. VIII.

Case 1, the patient was suffering from severe injuries, which nearly proved fatal. He, however, slowly convalesced; and when sufficiently recovered to bear the application of dressings, it was found impossible to adjust them so as to preserve the fragments in apposition. This was owing to decayed teeth, and the fracture being through the shaft upon both sides and nearly opposite, left the middle portion of the jaw unsupported and subject to extensive motion. In Case 3, the jaw was so thoroughly broken in pieces, that, had the patient survived his other injuries, doubtless the entire maxilla would have exfoliated.

It appears from this collection of cases that, although union occurs very promptly in fractures of the inferior maxilla, when circumstances are favorable to a quiet apposition of the fragments, non-union is not unfrequently the result of the most persevering efforts to effect a cure. This will especially prove true when the constitution is at fault.

The amount of deformity in the cases of union was so slight as not to be worthy of note.

BROOKLYN CITY HOSPITAL.

For the following account of the Brooklyn City Hospital we are mainly indebted to the Annual Report of the institution for 1854. In tracing the rise and early history of this institution, the remark that, "coming events cast their shadows before," seems to have been fully verified inasmuch as there had been an attempt at a city hospital some year or two previous which failed for want of support, some slight assistance which it had received from the city being stopped in consequence of its being not allowed by the City Charter. But the germ of a more successful effort was soon to be planted, and in the following extract from the minutes of the Brooklyn Association for Improving the Condition of the Poor, Dec. 11, 1844, we recognize that germ:—"On motion a committee was appointed consisting of Messrs. Nichols, C. P. Smith and Greenwood, to take the necessary preliminary steps to convene a public meeting on the subject of establishing a City Hospital." This meeting was held on the 17th February, 1845, when measures were determined upon to secure an act of incorporation, which was accomplished on the 8th May, 1845. On the 3rd June, the trustees named in that act accepted it, and made various appeals through churches and to individuals which were but feebly responded to. The occurrences are of too recent date to recapitulate the vicissitudes of the young institution; suffice it to say that, owing to the indefatigable nursing and unquenchable hopes of its originators, buoyed up by the benevolence of the late Mr. Augustus Graham, the workings of whose heart for its good, even at that early period, began to manifest themselves by a donation of five thousand five hundred dollars, a house was purchased and fitted up for the reception of patients in November, 1846. At this old building in Hudson Avenue an amount of good was accomplished to which the trustees must ever look back with pleasure. For two years the hospital here struggled with but doubtful prospects, when the benevolent spirit of Mr. A.

Graham again manifested itself. He announced on the 4th of July, 1848, his splendid donation of twenty-five thousand five hundred dollars, having the condition attached to it, that the citizens of Brooklyn should contribute a similar sum. This gave a fresh impetus to appeals to the public, but, alas, there was no response. Two years more elapsed in which the workings of the hospital convinced the trustees the more of the necessity for its existence and enlarged means of doing good. The new City Charter permitting an annual appropriation of two thousand dollars, gave the trustees additional hopes of success, and they determined to make another energetic effort, themselves setting the example, and at the monthly meeting of the 21st of October, 1848, a paper was handed round which footed up some thirteen thousand dollars. To this subscription Mr. A. Graham again contributed two thousand dollars. This was sent before the public, but exclusive of the absent members of the board of trustees, came back with the addition of only about four thousand. With this it was determined to go on and build by piecemeal; and Mr. A. Graham having very nobly withdrawn his conditions, plans and specifications were agreed upon, and the venerable benefactor himself removed the first sod from old Fort Greene, towards commencing the centre of the building. Singular that *he* was now using the spade in the first step of this noble enterprise, who, some thirty-seven years before, used it in throwing up the ramparts, the remains of which are yet within the hospital grounds.

On the 11th of June, 1851, the corner stone was laid with appropriate ceremonies. On the 28th of April, 1852, the centre was completed and thrown open for the inspection of the public. On the 29th it was occupied by patients, and from that time, under the auspices of a Providence that has seemed to move the hearts of the general, State, and City Governments to assist the trustees, at the same time infusing in them energy to assist themselves, they have been enabled, from time to time, to add the wings, and are now rejoicing in the completion of an entire building, it is hoped, capable of accomplishing every desirable object.

Mr. Augustus Graham has been so frequently mentioned in the course of this review that it may be well to record in a connected view, his different donations and bequests. They are as follows:—

His first of	$ 5,500
July 4, 1848, ...	25,500
October 21, 1850, ...	2,000
For instruments, ...	500
For furniture, (by will,)	5,000
In all amounting to the very handsome sum of	$38,500

He has gone to his rest and left a name that must endure to far distant times.

The building is a very handsome one, pleasantly situated on Fort Greene, and presents a front of two hundred feet facing due west on Raymond Street. It consists of a centre building four stories high,

fifty-two feet wide, and fifty-two feet deep, and with an extension back thirty feet; and two wings—a north and south wing—each seventy-four feet long, and fifty-six feet deep, and three stories high. About one thousand patients are annually treated in this institution. The following are the medical officers of this institution :—

PHYSICIANS.	SURGEONS.
James Crane, M.D.	De Witt C. Enos, M.D.
D. S. Landon, M.D.	D. E. Tussam, M.D.
H. S. Smith, M.D.	J. M. Menor, M.D.
J. C. Hutchison, M.D.	
RESIDENT PHYSICIAN.	RESIDENT SURGEON.
Henry W. Holmes.	William H. Babcock.

Report of Cases occurring in the Brooklyn City Hospital. By De Witt C. Enos, M.D., Attending Surgeon.

Case 1.—*Fracture of Skull—Depression—No Symptoms of Compression—Trephined—Recovery.*—(Reported from the Notes of Wm. H. Babcock, House Surgeon. By James Farly.)—Henry Wharton, æt. 32; born in England; been in this country five years; married; engineer. Was admitted to the Brooklyn City Hospital on the evening of Saturday, August 9th. He had been injured at the explosion of the steam-boiler at Wilder's safe factory, by which the building was prostrated, burying the patient and others in the ruins. He had lacerated and contused wounds on various parts of the body and extremities, also a wound in the forehead to the left of the median line and an inch and a-half above the orbital ridge. The wound had been brought together by interrupted sutures before admission. The stitches were removed that the wound might be examined, and cleansed, if necessary. The cranium was found fractured, and a portion of it, about an inch in length by three-quarters in width, was depressed; or rather, one end of it was the *thickness* of the *skull*, the other was slightly elevated above it.

There were no symptoms of *concussion* or *compression*. He was entirely calm and conscious; pulse and respiration normal, and the pupils obedient to light. Nevertheless, there being an external scalp wound, and an *irregularly depressed* fracture, it was deemed best to operate and not wait for inflammatory action to demand it; a contingency almost certain to arise from such a condition of things. As the depressed bone could not be moved by the elevator, the wound was enlarged into the T form, the trephine applied, a portion of sound bone removed, and then the fractured part taken away. The internal table was broken to a much larger extent,—and one piece of it was taken out, which ran back nearly an inch—leaving the rough diploe next the dura mater. This, however, and the other rough points were smoothed off as much as possible with the rough side of the elevator. There was slight hæmorrhage from a vessel in the dura mater, which the fractured bone had injured. A sponge, wet in ice-

water, was therefore left in the wound. The patient was entirely conscious during the operation.

August 10, half-past ten A.M.—Hæmorrhage not entirely stopped. Had an anodyne suppository last night; slept some; water drawn off with catheter; bowels not moved; has slight headache, otherwise feels very comfortable; wound drawn together by adhesive strips.

August 11.—Had rested pretty well; bowels moved by an enema; urinated several times; feels very weak; slight headache; tongue, slightly coated—white; pulse and respiration, normal; appetite, poor.

August 12.—Had violent headache last night; slight erysipelatous flush about the forehead and face, with swelling. Ordered—tart. emetic, one-eighth of a grain every two hours; toast water.

August 13.—Much better; had a comfortable night; constitutional disturbance disappearing; some headache; water-dressing applied.

August 14.—Does not sleep well; complains that the bed is hard; he had always slept on feathers; a feather bed ordered; wound granulating, and it suppurates freely; head kept upon the side to promote its exit.

The patient continued to improve, feeling well, and he was discharged, at his own request, before the wound was entirely cicatrized.

Case 2.—Fracture of Skull—Depression—No Symptoms of Compression—Trephined seventy-five hours after—Death.—(Reported by Dr. Butler, House Surgeon.)—John Dooner, æt. 38; born in Ireland; laborer; was admitted September 24, with laceration of the scalp and fracture of os frontis, extending on either side of the median line. It was caused by the fall of a heavy piece of timber. The fracture was two and a quarter inches horizontally, by two inches longitudinally. This was pretty uniformly depressed, about the thickness of the skull. The lower margin of the fracture was nearly an inch above the supra orbital ridge. At first there were symptoms of concussion; pulse frequent and small; nausea; vomiting; pupil contracted; soon became rational and calm in mind; no symptoms of compression. His scalp was shaved, wound cleansed, and lint and water applied. Dr. Enos saw him two hours after admission, and six after the injury; surface warm; pupils obedient to light; pulse 74; respiration 18; no nausea; mind, clear.

The location of the fracture, the uniformity of its depression, its great extent—whose removal would lay bare so much of the brain—the absence of the symptoms of compression, and of all cerebral disturbance, made it seem best to him not to hazard an operation for the present, but to wait and see if subsequent developments should demand it. Accordingly, quietness was enjoined, and an anodyne suppository to be used if necessary.

September 25.—Had a good night; pulse, the same; tongue, coated; breath, offensive; mind, clear; urine, free and normal. At eleven A.M., Dr. Minor saw the patient with Dr. Enos. It was deemed best not to operate. Ordered—ol. recini, ℥ss, rejected; enema of a pint of water, tepid, at one P.M., no effect. Three P.M.—Patient seems dull; sleeps constantly; pulse, 64. Ordered—ol. recini, lac. assafœtida, ℥ij., and spts. terebinth, ℥ss., to be injected into the

bowel, and to be followed in an hour with a pint of tepid water. This caused a free discharge of hard fæces; patient seems easier.

September 26.—Rested quite well during the night; says he feels well; pulse, 64. Light nourishment and ice allowed.

September 27.—Pulse, the same; more drowsy; takes nourishment and retains it. One P.M.—More insensible; no stertorous breathing; had another enema like the last, except the turpentine, no effect. Seven P.M.—Still more insensible; slight twitching of some of the facial muscles. Nine P.M.—Almost impossible to arouse him. After consultation, an operation was resolved on, and by means of the trephine and elevator, five pieces of bone were removed, varying from half an inch to an inch in width, and about two inches in length; dura mater not injured; a large piece of the skull, extending down into right frontal sinus, was movable, but not being depressed, it was not disturbed; patient had frequent slight convulsions during the operation; pulse continued 64; wound lightly brought together, and water-dressing applied.

September 28.—Had spasms about every half hour during the night; grow more frequent, with stertorous breathing; pulse, 58; takes no nourishment.

September 29.—He died at nine A.M.

Case 3.—*Compound Fracture of Skull—Depression—No Symptoms of Compression—Trephined—Death.*—J. Johnson, aged 55; born in Ireland; been in this country six years; married; laborer; intemperate; was admitted on Saturday the 23rd of August, at half-past six, P.M., with injuries, received about half an hour before, from being kicked by a horse. Compound depressed fracture of frontal bone; wound in integument, one inch and a half long; pulse fair; surface pale and cool; intellect slightly impaired; a little restless; arterial hæmorrhage from wound; no symptoms of compression at the time of his admission. Dr. Enos saw the patient at eight P.M., when he trephined, and removed the depressed portion, in several fragments, the area of which amounted to two or three square inches.

August 24.—Slept a little last night; no discharge from wound; pulse fair; intellect little confused; pupil sensible.

August 25.—Several discharges from wound in large quantities; pupil contracted, but sensible; pulse, 80; respiration, 25 to 30, and deep, continued so during day; not conscious; will not swallow.

August 26.—Condition about the same as yesterday; continued so up to nine o'clock P.M., when he died.

Remarks.—It is a mooted question among surgeons, whether the trephine should be used at once in cases of fracture of the skull with depression and no *symptoms* of compression, or the patient left to the resources of nature and to a secondary operation, should subsequent developments imperatively demand it? The impression left on the mind, from carefully watching the above cases, and others that have come under our observation, incline us to the opinion that, where the depression is decidedly well marked, the patient's chances of life and health are augmented by an early operation.

Case 4.—Scalp wound—Concussion—Compound and Comminuted Fracture of Radius and Ulna—Recovery.—Henry Castard, aged 32 years; born in Prussia; been in this country three years; married. Was injured at same time and place as the patient in Case 1, admitted same evening, suffering from a compound comminuted fracture of the radius and ulna of left extremities, slight wound in scalp, and symptoms of concussion; the fore-arm was greatly swelled, and the bones were in several pieces; placed it on an angular splint, bandaged it, and ordered it to be kept wet with ice-water.

August 10.—Symptoms of concussion have disappeared; feels comfortable; had half a grain of pulv. opii. last night; slept a little; bowels moved; and has passed urine; swelling greatly diminished.

August 15.—Swelling gone down entirely; put up in two parallel splints and sling.

September 8.—Removed splints; found perfect union; commenced passive motion.

September 20.—Can move his arm very well; rotary motion perfect; has use of his hand and fingers, and can grip quite hard.

Case 5.— Compound fracture of the Leg—Dislocation of the Ankle Joint, with Fracture of Internal Maleolus—Extensive Scalp Wound—No Symptoms of Concussion—Recovery.—Patrick Doligan, aged 45; born in Ireland; been in this country twenty years; married; coal-carman; admitted on the 8th of August, suffering from a compound comminuted complicated fracture of the right leg, and scalp wound, commencing at the top of the head, and extending to the front portion of right ear. Was carting a load of coal, and, seeing a friend on the side-walk with whom he wished to speak, he attempted to get down while the cart was in motion, in doing so, his foot caught in the check-chain, tripping and throwing him on the ground, and the wheel passed over his leg, and struck his head, making the wound above described. There was fracture of both bones of the leg about three inches above the ankle joint, and compound on the inner side; the internal maleolus was broken off, and the foot dislocated outward; reduced luxation; put a splint on the outer side of leg, secured it with a roller and many-tailed bandage, and placed the whole over a double inclined plane, and ordered it to be kept wet with ice-water; there were no symptoms of concussion; scalp wound brought together by adhesive strips.

August 9.—Upper portion of wound of scalp healed by first intention; slept pretty well during the night, but would start and jerk occasionally; complains of a throbbing pain in leg this morning; has not swelled any; wound dressed with cold water. Ordered—pulv. Dovers, grs. x., at night.

August 10.—Slept well, but started quite often; leg looks well this morning. In order to keep the parts as still as possible, the limb was put in a swing apparatus attached to his bed; wound in scalp all healed.

August 15.—Progressing favorably; wound in leg granulating; does not pain him any.

September 29.—Has gone on favorably; to-day has limb bandaged, and walks about the ward with the help of crutches.

Case 6.—Compound Complicated Dislocation of the Elbow-Joint—Recovery.—Terance O'Brien, æt. 16; born in Ireland; been in this country four years; was admitted on the night of the 13th of August; was engaged in Prentiss' hat factory, and in attempting to pass a hand over a pulley, his right arm was caught, and he thrown over the shaft, producing a compound dislocation at the elbow-joint; the humerus divested of all ligamentous and muscular attachments, protruded two inches through a wound in front. The inner condyle was knocked off, and there was a fracture of coronoid process of the ulna. Dr. Enos reduced the dislocation, put the arm on an angular splint, and ordered cold water dressing; pulse felt at the wrist.

August 14.—Did not sleep well; complained of pain in the joint; slight swelling; continue water dressing.

August 15.—Slept pretty well. Ordered—poultice to wound this morning; swelling slightly increased; does not complain of pain.

August 20.—Suppurates profusely; has made a new opening at the back of the joint.

August 25.—Both openings granulating; continue poultices.

September 29.—Wounds granulating nicely; small discharge of pus; will, without doubt, save the limb, and perhaps with some motion.

Case 7.—Dislocation of the Foot at the Scapho-Cuneform and Calcaneo Cuboidean Articulations—Reduction—Recovery.—Catharine Steers, æt. 21; born in England; single; admitted August 4th. The evening before, as she was coming off the ferry-boat, her right foot was caught between the boat and bridge. She said the boat pressed against her heel and toes against the bridge. The foot was doubled, and the metatarsal and cuneform bones were forced outward on the scaphoid, carrying the cuboid before them. The internal cuneform bone rested in the place of the middle on the os scaphoides. This latter bone remained prominent and in situ.

There was a great deal of pain and swelling at the time of her admission, and considerable deformity, although she said "it had been set twice by two different doctors."

The swelling and pain were so great, that no accurate diagnosis could at first be made. An evaporating lotion was therefore applied, and the foot kept elevated. A saline cathartic administered.

In a week the tumefaction had very much subsided, and the above described dislocation was clearly made out. Reduction was thus effected:—The tibia was placed perpendicularly, and one assistant held to it just above the ankle and made counter extension, while another grasped the metatarsus, and made strong extension. Dr. Enos, at the same time, with his fingers on the inner side of the foot resting against the prominent scaphoid, forced, with his thumbs applied to the cuboid bone, the whole dislocated part inward. It returned to its proper position with an audible snap. The foot slowly recovered, and in seven weeks she left the hospital.

ART. VII.—*Abstract of the Proceedings of the Medical Societies of New York.*

NEW YORK ACADEMY OF MEDICINE.

REGULAR MEETING, NOV. 5, 1856, DR. WILLARD PARKER, *President.*

COMPARATIVE ANATOMY OF HUMAN CRANIA.

DR. M'ELHERAN, Member of the Royal College of Surgeons, Edinburgh, said he would have sought the high privilege of addressing them two years ago, but he had found the field of his investigations still widening, and he was anxious to come before the Academy with an essay as complete as possible. From our works on Archæology, our museums, and from dentists, hatters, etc., he had reaped a rich harvest of facts. This world's-fair of human specimens, where the sons of men stand side by side, is the greatest school for the student of ethnology. Whatever credit his work might attain, is therefore due to the free spirit and kindly co-operation of the members of the profession in his adopted country.

The Doctor maintained that ethnology has hitherto been only an empiricism, because the transcendental doctrines of development, such as they are, have been misapplied or entirely disregarded by ethnologists. He contends that nature has repeatedly changed her mode of operation, and that she converged her forms in approaching man, who presents the most distinct evidence of antagonisms of unity and variety, and of a versatile vital principle, the *animus* which is not to be confounded with the *anima*, or soul.

He believed that the true doctrine of development, which he briefly elucidated, and the radiating degeneracy of the human family from the Celtic centre—supported the dogma of original unity. But races have been stereotyped, and evidently as permanently distinct as if they had been created separately. Oppressed Celtic types have repeatedly regained their true position, physically and mentally, but no inferior Gothic or other carnivorous race ever rises above a certain level; for in them the vital principle itself seems impaired. They are *stereotyped.*

The Doctor demonstrated that the brain and skull of the herbivora is superior to those of the carnivora, and that, therefore, we must have a new classification of animals.

He divides men, according to natural history, into *omnivora, herbivora, carnivora.* These are the types, found under various forms, *infantile, athletic, intellectual,* in the several continents of the world. We find ethnology a chaos of contradictions, because authors have not discriminated between forms arrested in development, accidental *types,* and permanent *stereotypes.* The common facts of natural history, which elucidate these phenomena, have been disregarded. Transcendental anatomy explains the varieties of forms; that is, degrees of development. Man is naturally omnivorous, but he degenerates and diverges into the other stripes. This fact supplies a philosophic basis for ethnology, including phrenology and physiognomy. The oval-headed, fine-limbed, *beau ideal* of the Celtic nations is the central type

and perfect form, contrasting with the Goths, Kalmucks, and other square-headed carnivora, and with true Negroes, Hindoos, and other narrow-headed herbivora. The unmixed, carnivorous Anglo-Saxons, have crania like the red savages, being generally broad, short, and distorted. And such is the common characteristic of the Gotho-German at this day. The average white American head is a regular long oval, like the Irish, Welsh, and Highland Scots. The Aborigines of the Old World were and are degenerate in proportion to their distance from the Celtic Mediterranean, degradation being most rapid southward into Africa and northward into Europe and Asia. Degeneracy is more gradual eastward.

The great trunk of the Celtic or central type, stretches through India, where it is modified. In China it is enfeebled and stereotyped. It terminates in Central America, which was the high central realm of the New World, as Celtica was of the old. This radiating degeneracy of men is like a process of chrystalization, the centre is most perfect—the superficies amorphous. The outer rind of the tree of life is most *suborganized.* These observations apply to races in their *aboriginal* nativities. The Anglo-Saxons, for example, still retain the evidences of their descent from the outer rind of humanity in north Europe.

In 1850–51, he made statistics of complexion, etc., of the inhabitants of Great Britain. He was the first to analyze that conglomeration of races, and to demonstrate that the Celtic type of Shakespeare and Wellington is dominant. His published address to the British Association, and his memorable controversy with the *Times*, in October, 1852, had extinguished Anglo-Saxonism in Britain, but the false theory still prevails in America. His friend and teacher, Dr. Knox, of Edinburgh, although merely theorizing, had inoculated our whole scientific and public press with Anglo-Mania. He (Mr. M'Elheran) had spent years of travel, and study investigating this special subject. He made and compared collections of portraits of the Celtic and Saxon races—specimens of which he now exhibited. By a combination of anatomical and artistic skill he had thus been enabled to enlighten dubious history. Beginning with living facts, he had traced the Celtic type back through Italy, Greece, Asia Minor, and Egypt, in illustration of their monuments, collections of crania, portraits, antique statuary, coins, etc., particularly in the new gigantic work, the *Tresor de Neumismatique.* While even the latest writers, Nott, Davis, etc., still erroneously dogmatize over a few crania, he had broken up new fields of inquiry, in the reports of hatters, dentists, hair-dealers, etc., and produced aggregate millions of facts in proof of our Celtic origin.

The history of emigration and the peculiarity of our language, so different from the Saxon dialects of East and North England, prove that our ancestors came from the Celtic South and West of England, and the other persecuted Celtic parts of the three kingdoms—not to mention Celtic Spain, Celtic France, and Celtic Belgium.

The Celto-Germans from the borders of the Rhine, probably outnumbered the Gothic immigrants from North Europe, whose type has been submerged in the general Celtic tide. The true American type is therefore not a hybrid Anglo-Saxon, but a pure bred Celtic race;

as their language, their history, their physique, and impulsive, versatile genius testify.

This paper which fixed the attention of the Academy during two hours, was very profusely illustrated with cranial forms, and portraits of the Celtic and Gothic races. By merely changing the head-dresses and style of wearing the hair, the lecturer demonstrated that the physiognomy, as well as the phrenology and lathy figure of the French and Gaelic peasantry is exactly and unquestionably the same as the typical Americans, such as Washington, Jackson, Taylor, Clay, Webster, etc. And that the Anglo-Saxon is like the red Indian and other carnivorous savages.

SOCIETY OF STATISTICAL MEDICINE.

REGULAR MEETING, Sept. 10th, 1856. Dr. J. W. CORSON, V.P., in the Chair.

(*Reported by* E. H. JANES, *Secretary.*)

Cases of Tetanus.—Reported by J. G. SEWALL, M.D., Physician to the Northwestern Dispensary.

Case 1.—*Tetanus* (*idiopathic*).—Thomas McAndrew; native of New York; of Irish parents; aged 10 years. When taken ill, resided at 122 Perry street, in the basement. Owing to the unkind treatment of his step-mother, he was removed to a shanty near 9th avenue. He was often forced to sleep in wet clothes, and turned into the streets at night to find shelter where he could. About Sunday, September 7th, was siezed with what seemed a bad cold; had sore tongue and throat.

September 9.—Tetanic symptoms set in, the muscles of the head and neck first becoming rigid; afterwards those of the shoulders, trunk, and lower extremities. Through the whole course of the disease, the upper extremities were but slightly affected.

Sunday evening, September 14.—First tetanic spasm. Tuesday, 16, had two. 18th, one; and so on every day one or more.

September 16.—Was first seen by physician. Up to this time had received no treatment save a blister applied to throat within two or three days of the attack. At first it was difficult to decide whether the blistered surface or the disease occasioned the most suffering. General condition was good; pulse 80 to 90, strong; skin natural; is devoid of pain; articulation intelligible though imperfect; muscles of head, neck, and trunk, rigid; head thrown back; bowels constipated; swallows with difficulty; throat still slightly inflamed, filled with mucus, giving a rattling sound to respiration.

An ounce and a half of castor oil was ordered, with dressing for blister, and mild liquid diet.

September 15.—Condition the same; bowels freely opened. Ordered tr. assafœt. ʒi. every three hours, with liniment containing chloroform to spine.

September 20.—The same. Takes beef-tea and broths. Continue same medical treatment.

September 21.—Consultation was held. General condition the same;

pulse 88; skin cool; has had several severe paroxysms, with marked opisthotonos; continue assafœt. and apply ice to whole course of spine. This was tried for one day without marked effect.

September 22.—An enema of oil of turpentine and castor oil, to relieve constipation. Continue other treatment.

September 23.—Arms somewhat rigid; jaws less movable; surface cool; pulse 90; strength slightly diminished. At this time the violence of the paroxysms were much abated, being limited subsequently to sudden twitchings of the body, brought on by movements or attempts at swallowing, or even unexpected changes in position, or remarks of attendants; occasionally marked by considerable energy, yet always without pain.

September 27.—Pulse 96, intermittent; bowels freely opened. Omit assafœt. to take chloroform, fifteen drops every four hours. Considerable mucus rattles through lungs.

September 28.—Slept well; has had no spasms; did not get his medicine; appears and reports better.

September 29.—Pulse 99; three spasms reported since yesterday P.M.; little sleep; no pain, although constant expression of anguish; tongue coated with thick yellowish fur, cannot be protruded; moves limbs freely; muscles of neck and abdomen rigid; swallows freely. Beef tea and punch.

September 30.—Pulse 84; slept well; did not get chloroform till to day; takes two quarts milk per diem by report.

October 4.—Chloroform discontinued, and tr. cannabis indica, twenty drops three times a day, ordered. Pulse 96; has had three or four dejections after oil; spasms reported occasionally in night; appetite good; improves rapidly.

October 6.—Pulse 84; sleeps well after medicine, which he now takes but twice a day. Yesterday at one o'clock had a slight spasm with protrusion of tongue; perspires freely; gets out of bed now and then.

October 13.—Pulse 92; has improved in all points. All medicine has been discontinued for a few days past, and may now be altogether laid aside. Appetite is strong; muscles much less rigid; sleeps well and reports very favorably generally.

October 22.—Has been up and dressed for a few days past; walks about the yard barefoot, and without coat or hat, by holding on to the fences; muscles of neck and abdomen very much relaxed; bowels regular; appetite strong; sleeps well.

November 1.—Cannot be kept in the house; moves about rather stiffly, walking on his toes in part; says he cannot run, yet can climb about with ease. Discharged well.

Case 2.—*Tetanus* (*traumatic*).—Felix McGill; æt. 35; Ireland. First seen, Saturday, October 4.—Eighteen days previously fell with a scaffold six or eight feet upon a pile of stones, sustaining an incised wound of the chin and of forehead, the edges of both of which were united by sutures. Both now appear to have kindly healed. Was well and about till yesterday, when he experienced a sense of constriction about fauces, with a stiffness of the lower jaw, and an inability to protrude

tongue, with a fear that if he did so he might bite it off. Accompanying these symptoms was a severe pain between shoulders. Has had several paroxysms, when mouth was drawn to one side and neck very stiff. These attacks resemble, in part, epilepsy, the patient lying on the floor; foaming at the mouth; great rigidity of muscles of neck and face, with strong facial contortions and a drawing of the facial muscles to the left side, the right appearing palsied. One of these lasted ten minutes without loss of consciousness. Tongue partially protruded affected the left side, the right commissure of mouth being shut while the left was raised and in motion. This condition was permanent; no pain in spine; sight and hearing both equally good on either side; mouth cannot be opened above one quarter of an inch; pulse 60, soft and natural; face flushed with an anxious expression. Can sit up or walk, though with difficulty.

Blister between shoulders. Cathartic of oil, also tr. cannabis indica, gtt. xx. every fourth hour.

October 5.—Much the same; sleeps after tr.; has had no paroxysms; oil operated.

October 6.—Was seen by two or three doctors, who used opiate enemata. While one was being administered in evening he suddenly died.

Case 3.—*Tetanus* (*traumatic.*)—John McG., æt. 9½.

July 16.—Sustained a slight wound of left foot, between second and third toes, from a rusty nail. Went to school in two or three days after, having suffered no inconvenience beyond a trifling lameness.

Tuesday, August 1.—Complained of soreness of throat, which attracted no attention till Thursday the 3rd, when his mother walked with him to the dispensary, to be treated for it. The physician in attendance noticed, on inspection, an inflammatory blush about the fauces, with some tumefaction, and ordered a stimulating poultice, giving internally spirits mindererus. The boy walked home, and was about the house the rest of the day. Next day, by report, had a high fever, with increase of stiffness and soreness of throat.

August 5.—Found him in bed, tongue hot and dry, countenance anxious, pulse about 90. Complains only of throat, on seeking to examine the tongue, found patient unable to open mouth more than one-fourth inch, through which space its tip was protruded. Thinking the stiffness of the jaw arose from the supposed quinsy, I gently endeavored to depress it, preparatory to the introduction of an instrument, for the inspection of the fauces, when the boy, for the first time, was seized with tetanic convulsions. In lifting him from the bed, the anterior and posterior muscles of the trunk and lower extremities, so counter-balanced each other, that he preserved the stiffness and straightness of a board. Great dyspnœa ensued for a few moments, and the countenance assumed a livid hue, probably from spasm of the glottis. Consciousness was preserved during the convulsions, the boy asking in their midst, that his tongue, caught between his teeth, might be liberated, he being unable to do so for himself. In a few minutes he was returned to bed, the tetanic rigidity continuing, being aggra-

vated, at intervals of from ten to thirty minutes, by strong convulsive movements of various degrees of severity, lasting from one to five minutes, accompanied with severe dyspnœa. Thus he remained during twenty-four hours, without sleep, consciousness, with the power of deglutition and articulation, remaining intact. The only voluntary muscles that appeared to be unaffected were those of the arms, and partially so of the face; no medicine was ordered save a calomel purgative.

August 6.—Continues much the same; no effect from medicine. Compound powder of jalap was ordered. Pulse 92; cannot now protrude tongue at all. While the convulsions seize him, he requires to be raised entirely from the bed. In this act, the body moves upon the feet as a fulcrum being, together with the lower extremities, extremely rigid. Four, P.M.—Free operation from medicine, with relief. Ordered Hoffman's anodyne and tincture hyosciamus in drachm doses, every two to three hours.

August 7.—Much as before; no sleep as yet, much thirst, and drinks freely, holding the cup himself; urinates also very freely. Has no pain in wound, which is barely perceptible, nor has had at any time, save when exercised by the convulsive movements. Omitted anodyne of yesterday, ordered tincture cannabis indica, fifteen drops every two hours, terebinthinate liniment to spine, and poultices to abdomen. Four, P.M. slept one and a half hours, the first for more than two days; rigidity less, can sit propped up at an obtuse angle, lower extremities bend upon knees by his own effort, can open mouth one-fourth inch, paroxysms fewer. Continue cannabis indica every hour, if paroxysms are more often; beef tea.

August 8.—Has had two or three severe convulsions, rigidity now very marked; pulse 120; mind clear; no more sleep; did not get medicine, but three times in night; continue it twenty drops every hour; takes beef tea freely; tobacco poultice to abdomen.

August 9.—Has slept perhaps one hour, all told; paroxysms continue at the intervals, before alluded to; some last longer, and are more severe; complains of no pain, save during convulsions, and now and then in right thigh and foot. For two days has had a cramp like pain, confined to right foot, occurring frequently, and relieved by slight flexion of foot upon the leg; muscles of face quiet, save in the paroxysms, when they are strongly contorted; mind clear, talks and swallows freely; left arm paralyzed, moves right readily, still holding his cup; is not apt to have a paroxysm directly after swallowing; which has been noted from the first. Medicine has been very irregularly given; continue it. Two, P.M. Gave chloroform by inhalation, was kept under its influence for five or six hours, during which time he slept; during sleep relaxation of all the muscles ensued.

Thursday, 10.—Pulse 130, very small; countenance has expression of great exhaustion; rigidity as great as before; body more strongly inclined to left side. Chloroform was omitted after nine last evening, as child refused it; commenced giving it this morning. When patient was partially narcotrized, a frightful convulsion ensued, lasting from five to ten minutes, giving a strong feeling, as if dissolution were impend-

ing; chloroform was discontinued. Father reports that since midnight, he had had two or three paroxysms, more severe than the one just alluded to. At two, P.M., patient died, no more paroxysms having ensued. Two minutes before death, he was conversing with his parents.

Remittent Fever of Children. By J. Lewis Smith, M.D.—Dr. Smith read a paper on the *Remittent Fever of Children*, of which the following is an abstract:—On the 2nd of September last, I was called to visit a boy, four or five years of age, who, during the past few days, had been dull and dejected, refusing, except perhaps in the morning, his play-things and his food. He was sitting by the fire, apparently unwilling to be disturbed, his eyes presenting a heavy appearance, pulse accelerated, a dry cough present, and after a careful examination, detecting no local disease, I pronounced the complaint remittent fever in its mild form. After ten or twelve days of expectant treatment, these symptoms subsided, and convalescence occurred.

A sketch of this case has been presented, not because it is worthy, *per se*, of record, but to serve as an occasion for some remarks on the subject of infantile remittent fever. It is well known to medical men that the expression designating this disease, is applicable to a variety of pathological conditions, and that, therefore, descriptions of it, contained in our standard works, are different, and, to a certain extent, contradictory.

Locock ascribes this form of fever to dietetic errors, and other causes of intestinal irritation. Butter, who published an able monograph on the subject, believes it an epidemic and contagious affection. The most eminent European writers on diseases of children, as Barthez, Rilliet, and West, describe as infantile remittent fever, a form of disease which they regard identical with continued fever of the adult. Taylor, taking a more comprehensive view of the subject, mentions five distinct affections under the generic term infantile remittent fever.

In this country, the two authors on diseases of children, whose works are most extensively read—Drs. Stewart and Condie—the one almost, and the other entirely, ignore all forms of the complaint, except that symptomatic of intestinal derangement, irritation, or inflammation. Dr. Stewart remarks—"From an examination of the opinions of the various authors, compared with some amount of experience in the disease, remittent fever, appears, in general, to be a symptomatic disorder, from derangement of the stomach and intestines, or of the appending viscera; or from an irritative action, at first excited in the mucous membrane of these parts."

Dr. Condie goes still farther in his definition of infantile remittent fever, stating—"It is, in fact, in every instance, either a gastro-enteritis, an ileitis, or an entero-colitis, accompanied by febrile re-action; and were it not that it is noticed as a distinct affection, in almost every work on the diseases of children, we should content ourselves with referring to the account already given of the inflammations of the digestive organs, for its pathology and treatment."

It has occurred to me to treat many cases of remitting fever in

children, both in private and dispensary practice, and my experience has gradually led me to form an opinion of the pathology of the complaint as it occurs in the upper wards of New York, materially different from the theories mentioned above.

It is not my purpose to describe the disease as it has fallen under my observation, except to say that it has presented all grades of severity, from the mild form, described at the beginning of this paper, to that severe grade in which delirium and an almost constant cough attended the exacerbations. My object is simply to present some considerations, in reference to the nature of the disease and the proper mode of treatment.

My observation of infantile remittent fever has been limited to the upper part of this island, a locality eminently malarious; and although the morbid conditions, mentioned by the authors cited above, will, no doubt produce fever of a remitting type in the impressible child, the following facts convince me that the form of the complaint, which I am called to treat, is, in a large majority of cases, miasmatic:—

1. The disease is very prevalent in spring and autumn, and rare in mid-summer and mid-winter, like malarious affections. There are certain streets where I have known it to prevail almost like an epidemic in the vernal and autumnal months. If the disease were, as Dr. Condie states, "in every instance, either a gastro-enteritis, an ileitis, or an entero-colitis," how can this influence of the seasons be explained?

2. Often, not always, the remissions are more marked than would be likely to occur in a symptomatic fever. The child may appear almost well in the morning, but in the afternoon and evening, exhibit such intensity of symptoms as to cause the greatest anxiety on the part of friends.

3. The symptoms are not altogether such as we should expect to find in a purely local affection. The patient will, it is true, when asked where he feels the pain, sometimes place his hand on the abdomen, and pressure upon the abdominal parietes not unfrequently produces great distress. Dr. Condie alludes to this tenderness, evidently believing it to be a symptom of inflammation. But I have always been satisfied that it was neuralgic, from the fact that pressure on the lumbar vertebræ, and frequently on the chest and limbs, caused as much suffering as when it was made on the abdominal walls. The patient, if old enough, will complain, too, of aching in the head, back, and limbs, which is more the symptom of an independent fever than of inflammation.

Again, constipation is ordinarily present, unless in the last stages of the disease. Intestinal irritation or inflammation, sufficient to cause so intense and protracted a fever as is often present, would be more likely to cause diarrhœa.

4. Children, even nursing infants, take intermittent fever; why, then, may they not take remittent fever, from malaria? In my class at the dispensary, children with these diseases are frequently brought in together.

5. I have found that measures directed to the alimentary canal, beyond simple purgation, do more harm than good. They fail to ameliorate symptoms; they weaken and distress the child. Moreover, when remissions occur, quinine will materially abridge the disease.

6. Death seldom occurs from this affection. In one or two fatal cases which have fallen under my observation this result followed convulsions and coma; and Dr. Stewart remarks, "Dissections have furnished but little light on the morbid condition of the system in remittent fever; for, on a fatal termination, the transmission to the brain is the ordinary course of the disease." The mode of death then, and the post-mortem appearances, do not comport with the doctrine, that the intestines are the seat of the morbid process.

Dr. Condie does not agree with Dr. Stewart, but attributes death to inflammation of the intestines. I do not think that the remittent fever which I have treated, if uncomplicated, ever terminates in this way, for I have never seen a case in which abdominal symptoms did not yield to simple measures.

7. Continued fever of the adult is of rare, and infantile remittent of frequent occurrence in the locality of my practice. The latter is not then identical with the the former, as it appears to be in London and Paris, from the descriptions given by Rilliet, Barthez, and West.

The above facts appear to me conclusive that the form of infantile remittent fever, which it has been my lot to treat, has been generally of a miasmatic character.

It is very important to understand the nature of this affection, as the treatment will vary according to the theory we adopt. If living in a malarious region, we embrace the Broussaian views of the American authors whom I have cited, and treat the fever as a local disease, we shall fail to ameliorate symptoms, and be mortified and discouraged by the result, if I may judge from my own experience. My reliance at present is mainly on expectant measures, till remissions occur, and then on the exhibition of quinine. In cases thus managed, convalescence has been more speedy and certain, than when opium, calomel and counter irritation have been employed to remove intestinal irritation, or inflammation.

At the risk of appearing presumptuous, I have thus presented a theory of infantile remittent fever not, indeed, novel, for Taylor attributes one variety of it to miasm, but different from that contained in any American and most European treatises on diseases of children. I am the more anxious that the true nature of the disease should be understood, because I believe that the accepted doctrine is exceedingly pernicious to practitioners in malarious regions, and especially to the younger members of the profession who rely more on books than experience for guidance. The fact, too, that remittent fever has been in my practice the most frequent affection of early life, in the vernal and autumnal seasons, gives additional interest to the subject.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, June 25, 1856, DR. BOLTON, *President.*

(Reported by E. LEE JONES, M.D., *Secretary.*)

Single Heart.—Dr. ALONZO CLARK presented a *heart* removed from a child, which lived six days and one hour. The case occurred in the practice of Dr. Blakeman, who attributed death to some malformation of the heart. At the request of Dr. Blakeman, he examined it, and on inspection it is seen to be a *single heart*, with one ventricle and one auricle, and apparently, there is no attempt to produce another ventricle or auricle. The aorta is large. One large vessel arises from the ventricle. From the aorta, at a low point, two vessels are given off. In what manner the blood was conveyed to the lungs is not clearly manifest, though he conjectures that these two vessels were the pulmonary arteries. The child suffered but little inconvenience, was a little blue in the face, was well grown and plump.

Fungus Cerebri—Its Microscopic Examination.—Dr. CLARK then exhibited a specimen of common occurrence, and not of much interest in itself, namely: a *portion* of *fungus cerebri*, following a severe injury.

It was placed in his hands by Dr. Buck, and at his desire, he examined it by the microscope, with a view of ascertaining the nature of the material constituting the excresence.

Surgeons generally consider it to consist of the substance of the brain; he, however, failed to discover brain matter of either kind, but cells and granules were observed in considerable quantity. No nerve fibres were seen. It was constituted differently in different portions. One part is composed of granules of various sizes, greatly resembling in structure the diphtheritic membranous exudation, described by Bretonneau, and a specimen of which was laid before the members at a meeting of the Society some months ago, (in February, 1855). Another part is seen to consist of granular cells with minute nuclei, and another contains cells with large nuclei and nucleoli. No part of the cranium could produce a substance similar to the second variety. It is constituted altogether independent of brain matter. In the first and second parts single fibres are seen.

Absorption of Skull from Pressure of Pacchionian bodies.—Dr. T. C. FINNELL presented a *calvarium*, removed from a patient fifty years old, who died of acute bronchitis. On the superior portion of the internal table are four depressions, caused by the pressure of the Pacchionian bodies. In three of them the absorption has extended through the diploe, leaving only a thin shell of bone between the dura mater and the exterior of the cranium.

Meningitis.—Dr. FINNELL next exhibited the *heart* of a boy who died of *acute meningitis.* He had always enjoyed good health. Two days previous to his death he was exposed to the sun. In the evening he complained of pain in his head, and during the night he vomited, had high fever, and soon became delirious. Towards the next evening coma commenced, accompanied by slight convulsive twitchings, which

recurred at intervals until death, which took place about forty hours after the attack.

Autopsy twelve hours after death, revealed the anterior surface of the brain covered with pus; no arterial congestion. Sinuses moderately filled with blood.

Lungs healthy, but adherent at several points. Mesentric glands enlarged.

Serous Cysts of Kidneys.—Dr. Cox presented a specimen of *serous cysts* of the *kidney* for Dr. H. N. Bennett, of Bridgeport, accompanied by a written history.

The pathological specimen here presented, was taken from a gentleman, 48 years of age at the period of his death. In a symptomatological point of view, I believe this case to have been almost unique. I had been the medical attendant of this man for thirteen years previous to his decease, and during that period he for the most part enjoyed firm health, having a robust frame, and a degree of enbonpoint approaching at times to corpulence. The only exceptions to his general good health, were occasional attacks of what was considered indigestion, the result or accompaniment of some functional derangement of the liver. At these times he suffered much from abdominal pains, gastric irritability, and diarrhœa; the skin became slightly tinged with yellow, the tongue covered with a thin yellowish coat; the quantity of urine was never much diminished, but during the latter years of his life was much increased, and he was commonly required to rise once or twice each night to void it. The patient dated these attacks from a severe dysentery many years previous, since which time he had had, to use his own familiar expression, these "*troublesome bilious turns*," generally but once a year, however, and that during the summer season. Appropriate treatment directed to the alimentary canal and liver, always relieved these indispositions in a short time.

The summer previous to my patient's death, his health became more seriously impaired, and his indisposition was more persistent. At this time constipation took the place of diarrhœa, but the same loss of appetite, gastric irritability, pale yellow tinge of the skin, etc., occurred as on former occasions. After the severity of the symptoms had subsided, I advised him to a change of air, and acting upon this advice he made a visit to the western part of New York, remaining there several weeks. He then returned home much improved, and continued through the winter to enjoy comparative health, but not the vigor of former years. In the month of April he began again to decline, presenting the same train of symptoms as during the previous summer, with the addition of considerable dyspnœa upon slight exertion. I now began to feel much alarmed at his condition, and thoroughly examined the thoracic organs, fearing that there might be organic disease in that region, but could detect nothing whatever. The alvine evacuations at this time were also perfectly normal in appearance, showing no deficiency of bile or anything to suggest the existence of organic or even functional disease of the liver. Under these circumstances, I naturally adopted the diagnosis by exclusion, and directed my attention to the kidneys. The

urine was of very nearly normal appearance to the eye, but upon testing it with heat and nitric acid, I found it contained large quantities of albumen. The quantity of urine was above the normal standard, and its color somewhat paler than usual. It must now be borne in mind, that my patient had never complained of pain in the renal region, had never had œdema of the extremities, or effusion in the serous cavities, had never manifested any of the cerebral symptoms common in Bright's disease, in short, had never exhibited any of the more positive diagnostic symptoms of organic disease of the kidney. But here was evidently the sole seat of organic disease. This case is still farther remarkable, inasmuch as none of these symptoms were developed up to the period of death, with the exception of coma a few hours before dissolution.

Some six or eight days before his decease, my patient began to complain severely of sore throat, and this anginose affection appeared to increase in intensity, up to the last day of life. The mucous membrane of all the posterior fauces exhibited a deep red color, very nearly resembling that of the angina which usually accompanies erysipelas. The dyspnœa at this time was very great, and formed the most urgent symptom. Nothing afforded even temporary relief, and he gradually sank, becoming comatose a few hours previous to dissolution.

Post Mortem.—The autopsy presented a remarkably healthy condition of all the thoracic and abdominal organs, with the exception of the kidneys. These were both much increased in size, the enlargement being the result of the development of numerous cysts in the whole substance of the organ. They varied in size from that of a large filbert to that of a pin's head. The majority were filled with a clear albuminoid fluid, having not at all the odor of urine; a portion contained a muddy fluid, varying in color from a deep brown to a brick dust red, appearing to me like the *debris* of old extravasated blood mingled with the clear albuminoid fluid above mentioned. Portions of the tubular substance of both kidneys appeared to be in a comparatively normal condition, but the cortical substance seemed almost wholly in a degenerated state, and here the cysts were large and very numerous.

The development of cysts in the kidney is by no means a rare occurrence, and their genesis is so well determined that it would be idle for me to attempt to present anything new upon this subject; but I believe it to be very rare that this degeneration proceeds to so great an extent as in the present case, while the general health is so well and so long preserved, and so few of the ordinary symptoms of renal disease are developed. The organic changes in this case must have been the work of years; and yet, up to a few months previous to dissolution, no serious derangement of the general health occurred, and no symptom pointing directly to the seat of disease. I attributed the dyspnœa accompanying the termination to uræmic poisoning, as it was too gradual and of too long continuance to admit of the supposition of œdema glottidis, one of the very rare terminations of *morbus Brightii*.

The only plausible explanation of the great want of renal symptoms for so long a period in this case, appears to me to be in the hypothesis

that the cyst-formation was the predominant pathological element, and that a large number of the urinary canals remained for a long time previous, and in a comparatively normal state. It may readily be conceived, adopting the cyst-genesis of Frerich and others, that the blocking up of isolated tubuli by the fibrinous exudation, and the consequent distension of the Malpighian capsules into cysts, might go on for a series of years before involving so large a portion of the kidney as to cause the system seriously to feel the organic change and consequent loss of function; and furthermore, this gradual degeneration of the kidney would be much better borne than a sudden change in a large portion of the organ, such as is common in other more acute forms of Bright's disease.

Regular Meeting, September 10, 1856.

Fluid from Hydrocephalus.—Dr. Wm. Detmold exhibited about half a pint of clear, limpid fluid, which he had removed to-day from a child laboring under hydrocephalus. He had frequently operated—in one instance, he was informed the child had recovered; otherwise, he had never cured a single patient by puncture and pressure. His experience was against hoping for good results. Surgeons generally are timid as to the introduction of air—in one of his cases air entered the cavity accidentally—no bad consequences ensued.

Fibrous Tumor of Uterus.—Dr. T. C. Finnell presented the *uterus* of a colored woman, æt. about 46 years, who was subject to occasional attacks of epilepsy. Just within the cavity of the uterus, under the mucous membrane, was found a small *fibrous tumor.* No other lesion was observed.

Peritonitis.—Dr. F. presented the *rectum* and *colon* of a gentleman, some 50 years old. Seven years ago he was attacked with dysentery. Since that time he had frequent derangements of the digestive organs—constipation alternated by diarrhœa. Thirteen days ago, a bougie was gently introduced up the rectum. Symptoms of peritonitis were developed on the subsequent day. He died yesterday.

Post mortem examination revealed evidences of general peritoneal inflammation—the abdominal cavity contained six ounces of pus. The veins of the colon and rectum were in a varicose condition. The lower part of the rectum was ulcerated and riddled in every direction. There were two fistulæ in anno, which opened into the rectum; one of them terminated an inch from the anus, the other an inch and a quarter.

Dr. Markoe stated that the patient, from whom the specimen was obtained, had been under his care five years ago. He was then affected with diarrhœa and tenesmus. An examination by the speculum, at that time, indicated the present condition of the rectum.

Dr. Post remarked the specimen was interesting in another respect, viz., the point of termination of the fistulæ internally, just within the sphincter, its most usual place; the probe can, however, be passed up further, owing to a loose mucous membrane, which always accompanies these cases.

Scirrhus.—Dr. Finnell next presented a *cancerous tumor*, removed

from a female, æt. 29 years, married; the mother of four children, all of them of the strumous diathesis. (See history.) She has always enjoyed feeble health, is of a dark complexion, and thin spare habit of body. Three years ago she noticed a small movable tumor on the left side, five inches below the nipple. After a quiescent period of two years and a half, it commenced growing rapidly, accompanied by sharp lancinating pains.

On the 16th of June she was placed under the influence of ether, and the tumor removed. It resembled a scirrhous tumor, taken from the breast in all its parts. Examined by the microscope, it showed a few shells of irregular size and shape, with a large quantity of granulous matter imbedded in a structureless blastema.

Mrs. F. informed me that her mother had a tumor on the back a little below the right scapula. It is irregular in shape and larger than a hen's egg, causing no pain or inconvenience. She has given birth to thirteen children, all of a scrofulous constitution.

Mrs. F.'s grandmother died of cancer of the left breast at the age of forty-three. Her great grandmother also died of cancer of the breast, of fourteen years' standing, at the age of forty.

One aunt, æt. 35, had a tumor of the left breast, the size of a hen's egg, eleven years ago. From the time of its appearance it grew rapidly for one year, it was then cauterized freely, and disappeared. The cicatrix is very painful at times, especially in warm weather.

Another aunt, æt. 38, the mother of two children, had a tumor in the left breast fourteen years ago. At the end of eighteen months from its first appearance, it was gradually removed by the use of iodine.

Another aunt, æt. 44, the mother of three children, has a tumor the size of a pigeon's egg on the instep, of ten years' standing; it is growing rapidly at present, attended also with pain.

Another aunt, æt. 48, the mother of two children, has a tumor on the right clavicle, of six years' standing, it gives no pain or inconvenience.

Another aunt, æt. 50, the mother of nine children, has a tumor in the right breast, of two years' standing; at present it is growing rapidly.

In five out of six cases, no children were born after the appearance of the tumors. Mrs. F.'s father died of consumption at the age of thirty-eight. Her grandfather died also of consumption at the age of forty-two.

Chronic Rheumatic Arthritis of Hip.—Dr. F. M. Wright presented a specimen of chronic rheumatic arthritis of hip. The patient was an old colored man. No history of the case could be obtained, except that for some sixteen years before his death, he had been so lame as to be almost entirely unable to work, and at intervals, suffered severe pain in the hip-joint.

He died from some other affection, and on *post-mortem examination*, the joint appeared to be firmly anchylose, but after long-continued maceration, the bones separated, and presented very clearly the marks

characteristic of the disease, viz.: enlargement and flattening of the head of the femur, absence of articular cartilage and partial eburnation of its articular surface, and bony vegetations surrounding it. Precisely corresponding changes have taken place in and around the acetabulum, together with osification of its cotyloid ligament. These may all be seen with great distinctness in the specimens.

Cyanosis.—Dr. George T. Elliot presented a heart obtained from Mary C., who died on the 8th of September, aged four weeks. From her birth she had presented every symptom of cyanosis, and no other disorder of function than those referable to the circulatory system. She was kept on her right side, with her head elevated, the greater part of her life. On the 6th inst., she was bluer than I had ever seen her, and cold, though she nursed well, and presented no embarrassment of respiration or circulation. She was well rubbed and wrapped up, and warmth restored. On the 7th, she appeared as usual. Her skin, both on the body, face, and extremities, very much mottled, and especially blue at the extremities. She nursed well, and slept well, and continued to do so during the morning of the 8th. In the afternoon a change was observed, and she died easily and without pain. No convulsions, no stupor, no marked deepening of color; but her breathing becoming gradually fainter, finally ceased. The lungs were healthy, but little conjested; collapsed cell; pericardium and pleuræ healthy in every respect. Circumstances prevented the removal of all the thoracic viscera, and the heart alone was secured without the ductus arteriosis. The heart is natural in size and appearance. The foramen ovale and Eustachian valve normal in position and size. The foramen ovale was sufficiently open at its upper border, as to admit a No. 6 steel sound. The coronary vein will admit a No. 5 steel sound, and the probe can pass into an open space occupying a large proportion of the wall of the left auricle, and extending as far as the base of the left auricule, below as far as the line of demarkation between the ventricles and left auricle, and above as far as a good half inch. Aortic valves hold water.

Aneurism of Left Ventricle.—Dr. Elliot also presented a specimen of aneurism of the left ventricle. The following is the history of the case:—Isabella Woods; Ireland; æt. 32; domestic; admitted to Bellevue Hospital August 16th, with the following symptoms: great dyspnœa; congestion of the face and neck; frequent and small pulse; hands and feet cold and blue. With the exception of an attack of rheumatism seven years ago, her health has been uniformly good until the last six months, when her breath has been gradually growing short. A fortnight before admission, her feet and abdomen began to swell. When admitted her abdominal walls were extremely tense, though the contained fluid did not appear to be great in quantity. There were also the signs of effusion into both pleural cavities, reaching on the right side somewhat above the inferior angle of the scapula, and rather less in quantity on the other. A distinct systolic blowing sound was heard over the apex, second sound natural; heart hypertrophied, with the apex reaching to the left of its normal beat; the patient was

restive and suffering, and all satisfactory exploration was obtained with difficulty; the legs were extremely œdematous and painful, and when punctured in several places, discharged copiously. Ordered a hydragogue cathartic.

August 19.—Passed a bad night, unable to sleep, tossing from side to side in search of relief; bowels freely moved, but without relief. The urgency of the symptoms, and the apparently hopeless character of the case, led to the belief that paracentesis might afford some relief; and in the evening, some six quarts of fluid were taken from the abdomen. The omentum or intestines interfered with the flow, so that the last two quarts were only withdrawn by the aid of probes passed through the canula.

August 18.—Slept all night, much relieved by the operation. Dyspnœa still urgent. Diuretics and stimulants ordered, but without benefit. She steadily grew worse; effusion in chest and abdomen increasing, and greatly desired the relief from another operation; but as she had suffered more pain than usual in the vicinity of the wound, her wishes were not acceded to.

On the 21st, at five P.M., she died. *Post mortem*, fifteen hours after death; face and neck extremely congested; abdomen considerably distended, containing about ten or twelve quarts of fluid; some fresh coagulable lymph on the convex surface of the liver; no other evidences of peritonitis; liver weighed 3lbs. 11oz.; capsule of Glisson commencing to contract; kidneys much congested; lungs healthy, with some old tubercles and cicatrices at apex of the left; they were much compressed by the pleuritic effusion, which amounted in all, to some eight or ten quarts; heart hypertrophied, weighing with pericardium $23\frac{1}{2}$ oz; the pericardium contained 1 oz. of serum, and was attached, for about a space of three inches in diameter, over the anterior wall of the left ventricle, the adhesions were not very strong, readily detached, and leaving a red inflamed surface; aortic valves healthy; mitral valve, though sufficient, yet had its anterior curtain slightly thickened. The anterior wall of the left ventricle, exhibited a dilatation soft to the touch, corresponding in extent with the adhesions of the pericardium; the wall was here very thin, about a line in thickness; the cavity was filled with a large clot, laminated, about half an inch in thickness, and three in diameter, nearly circular in form and loosely adherent towards the base; between the laminæ was a cavity, holding near half an ounce of whitish fluid, containing pus. The heart did not appear to be the seat of fatty degeneration.

PART SECOND.

REVIEW AND BIBLIOGRAPHICAL NOTICES.

ART. VIII.—*The Transactions of the American Medical Association*, instituted 1847. Vol IX. Philadelphia. Printed for the Association. By T. K. & P. G. COLLINS. 1856. 8vo. pp. 907.

THE ninth volume of the Transactions of our National Association comes to us generous in size, rich in material, punctual in its time of appearance, and creditable in its mechanical execution. Many of the papers abound in valuable facts, and evince patient and industrious research, and the work, as a whole, reflects honor upon the body from which it emanates. The opening paper is the farewell address of Dr. George B. Wood, of Philadelphia, former president of the society, written with good taste, and with the best spirit, in which he takes a commendatory view of the past and present of the association, and a hopeful view of the future.

The first of the scientific papers is Part Second of his Report on *Deformities after Fractures*, by DR. FRANK H. HAMILTON, which includes the consideration of fractures of the scapula, arm, forearm, and hand, and occupies one hundred and sixty-three pages. This portion of his subject is abundantly illustrated by cases of different forms of fracture of these parts, and by plates of specimens, and of different kinds of apparatus, and also by numerous quotations from the works of different authors as to their mode of treatment. The labors of Dr. H. on this subject are very creditable to him, and are rich in practical results, and have already been acknowledged by the profession in different ways.

The next paper in order, the report on *Hydrophobia*, embodies much interesting and valuable information respecting a disease whose almost unvarying fatality invests it with a well-deserved horror, and affords a strong stimulus to renewed and increased effort to throw light upon its pathology and treatment. DR. T. W. BLATCHFORD, of Troy, the chairman of the committee, deserves credit for the industry with which he has collected one hundred and six cases of the disease from physicians in different parts of our own country, a large proportion of which were obtained by personal application to the individuals whose names were connected with them at the time of their occurrence. Of these cases, he gives a schedule, containing the description of the cases, the authority for them, and the time when each patient was bitten, sickened, and died. The investigations of our author go to show that rabies, contrary to popular prejudice, occurs most frequently in cold countries, and

during autumn, winter, and spring; and that of the whole number of cases which occur out of the tropics, during the year, nearly an equal proportion occur during each month of the year. Of two hundred and fifty cases in France, England, and this country, seventy-eight occurred during the months of March, April, and May; sixty-five during the months of December, January, and February; fifty-nine during June, July, and August; and forty-eight during September, October, and November. "Hence," as he says, "it may be inferred that the appearance and prevalence of the disease at particular seasons, and in certain localities or regions, are *accidental*, and in no way connected with or produced by any thermal or sidereal influence." These facts may quiet the apprehensions which we have been led to associate with the "dog-day" season, when so many of that faithful race have to pay the forfeit of their lives to the supposed danger of originating and communicating this fell scourge; and show that the precautions against the communication of the disease should not be limited to the short space of the hot months of the year. Rabies seems to be a rare disease in tropical climates. Nor does putrid meat, or want of food and drink, ever generate the disease in the dog, as has been satisfactorily proved by experiments, and is also shown by the absence of it in countries where dogs are in the habit of eating putrid flesh. We are, therefore, as the author very candidly remarks, driven to the humiliating acknowledgment that the true cause of the disease is not known, or very imperfectly understood. He adds, "In view of the conceded inadequacy of all the external causes we have considered, to account for the origin of the disease, and the fact that nearly every case of genuine rabies has been traced to the bite of some animal, it is fair to conclude, *it never proceeds from any other cause.*" He thinks that the peculiar liability to rabies in those animals by whose bite it has been followed, consists in a *constitutional irascibility*, and says that the dog is more prone to anger than any other domesticated animal, this irascible temperament varying in degree in different species of the genus, and in different individuals of the same species. This constitutional irascibility of the dog he regards as the basis of the true etiology of canine madness.

The term rabies, our author says, does not necessarily imply *disease*, but violent passion or strong emotion, and is synonymous with rage, fury, or anger; and he gives several instances in which rabies has been occasioned by the bite of an animal not rabid. Some consider rabies an inflammatory disease, while a large number regard it as a *nervous affection.* The fact that the disease has been prevented by excision of the cicatrix after it had become painful, swollen, and discolored, would seem to afford positive proof that the virus is not directly absorbed into the system, a point of great practical importance, as well as of encouragement, as it allows of the prevention of the disease by excision of the bitten part any time before the occurrence of the general symptoms which indicate constitutional infection, which may not take place before the end of one, two, or three weeks. The virus is thought, by one writer, to *lay dormant* till the pain in the bitten part comes on, and therefore, that excision and ablution might afford relief at that time,

and even when the patient is suffering under hydrophobia. At the same time, it is better always to perform the excision of the bitten part, when practicable, as soon as possible after inoculation. The cases of hydrophobia collected, show that very few result from bites on parts of the body protected by clothing, and also that it is not necessary that the animal inflicting the wound should itself be diseased.

The average period of *incubation* in the eighty-nine cases in which it was ascertained was about seventy days, being thirty days and under in twenty-three cases, and upwards of two hundred days in six cases. The average duration of the disease in the seventy-two fatal cases in the human subject was three days—five died on the first day, twenty on the second, twelve on the third, twenty-seven on the fourth, etc., and one on the twenty-first day. In eighty-nine cases out of one hundred the injury was from the bite of a dog; in nine, from that of a cat; and in one each from a raccoon and a fox; one supposed from the saliva of a cow; and one from that of a calf. In forty instances the injury was upon the hands; in fifteen on the face; in eleven on the leg; and in nine on the arm. The cases embodied in the report of this committee present many points of interest in the history and symptoms of this singular and fatal disease.

Next in order follow two Reports, the first by Dr. S. D. Gross, on *The Causes which Impede the Progress of American Medical Literature;* and the second, that of the committee on *Medical Literature*, signed by Drs. R. Breckinridge, J. B. Flint, and D. L. McGugin. Both well written, but which we pass with a mention of their titles, as we must also that of the next paper, a report of the committee on *Plans of Organization for State and County Societies*, as the amount of material in the volume prevents our giving even an abstract of all the papers.

We next come to a Report on the *Changes in the Composition and Properties in the Milk of the Human Female, Produced by Menstruation and Pregnancy*, by Dr. N. S. Davis, of Chicago, Illinois, with plates showing the appearances, under the microscope, of milk at different periods of lactation, both when menstruation is and is not taking place, and when it is complicated with pregnancy, with tables containing the whole amount of solid matter, and also of butter, sugar, and extractive matter, casein, and salts in that fluid, under these different circumstances, presenting well-marked results. The conclusions drawn by Dr. Davis as to the changes produced by menstruation and pregnancy in the *composition* of the milk are—

1. The occurrence of pregnancy during lactation, produces a very marked diminution of all the solid or nutritive constituents of the milk, such diminution continuing to increase as the pregnancy advances.

2. In examining the separate proximate constituents, it will be observed that a much greater relative diminution takes place in the casein, the butter or oil, and the salts, than in the sugar and extractive matter.

3. There appears to be added to the milk secreted during the progress of utero-gestation, some of the *granular* bodies or colostrum cor-

puscles, and numerous minute infusoria or animalcular germs, which have been very rarely found in healthy milk.

4. Changes, the same in kind, take place in the milk secreted after the establishment of regular menstruation, but much less in degree; and the relative diminution of the several constituents is more uniform.

Cases quoted by Dr. D. show that the *quality* of the milk, as proved by its effects on the child, is also unfavorably influenced both by pregnancy and by menstruation, but by the latter less than by the former, presenting practical bearings of great importance to the profession. It is hoped that the investigations so carefully and accurately commenced by Dr. Davis, may be continued and extended so as to establish the conclusions arrived at by him on a still firmer basis.

The paper which follows, a Report on the *Sanitary Police of Cities*, by Dr. James M. Newman, of Buffalo, N. Y., contains much valuable and interesting matter, but of a kind which will not allow of an abstract, without encroaching too much upon the limits assigned to our notice.

Of the next Report, that on the *Treatment of Cholera Infantum*, by Dr. A. J. Fuller, of Bath, Maine, extending over six and a half pages, we regret to be obliged to say that we consider its brevity its greatest recommendation. Dr. F. seems at a loss to account for there being so little mention made of this disease by European writers, overlooking the fact that it is not met with on the other side of the Atlantic. The report contains nothing that is new, either on the pathology or the treatment of this scourge of our infant population, unless it be the application of leeches to the right hypochondrium in the early and primary state of the disease; and the use of local depletion by the same means when swelling of the bowels or heat about the head is present, in which cases he says they should never be neglected. His experience must be different from our own, and from that of most of those practically familiar with the disease in this latitude.

Occupying the next thirty-five pages, we have the Report on the *Use and Effect of Applications of Nitrate of Silver to the Throat, either in Local or General Disease*, by Dr. Horace Green, a subject which has occupied the attention of the profession, to a considerable extent, for two or three years past. Dr. G. speaks in this paper of the effect of nitrate of silver in the treatment of—1. *Follicular Pharyngo-laryngeal disease;* 2. *Acute and Chronic Laryngitis;* 3. *Membranous Croup;* 4. *Œdema of the Glottis;* 5. *Hooping-Cough;* 6. *Spasmodic Asthma;* 7. Of its effects employed as a *Topical Remedy* in the treatment of *Tuberculosis, following or complicated with Bronchial Inflammation.* The subject is so extensive that a mere abstract of the report would occupy considerable space, and as it has been so thoroughly discussed in the medical periodicals within a recent period, we pass it over without further notice.

Following this are—1. A Report on the *Best Mode of Rendering the Patronage of the National Government Tributary to the Honor and Improvement of the Nation*, by Dr. Joshua B. Flint; 2. A report of the Committee on *Education*, by Dr. William Henry

ANDERSON; and 3. A Report on the *Medical Topography of the Eastern Shore of Maryland*, by DR. P. WROTH, of which we can only mention the titles.

The present volume of Transactions is rich in facts and observations on the subject of yellow fever, containing a *History of the Epidemic of Yellow Fever in Charleston, S. C., in* 1854, by DR. D. J. CAIN; a report on the *Epidemics of Louisiana, Mississippi, Arkansas, and Texas*, by DR. E. D. FENNER, of New Orleans, with a sketch of the yellow fever of Norfolk and Portsmouth, Va., etc.; and a Report on the *Meteorology, Mortality, and Sanitary Condition of New Orleans, for the years* 1854-5, by DR. E. H. BARTON, of New Orleans. From these we have taken some facts, which we thought would prove of interest.

The heat in Charleston was greater, during the summer of 1854, than that of any year since 1804, the thermometer reaching 95° on the 9th of July. The mean dew-point in May was 68·67; June, 72·50; July, 76·70; August, 77·29; September, 73·83. The whole number of estimated cases of the disease that year was between twenty and twenty-five thousand, out of a population of fifty thousand; say one in nearly two of the population, and yet the mortality was comparatively *very small*, the number of deaths being six hundred and twenty-seven, or *about three per cent.* Deaths are recorded from the week ending August 19 to the week ending November 25, the greatest number having occurred during that ending September 16. Of the whole number of deaths, six hundred and twelve were in whites, and fifteen in blacks and colored. Forty-eight were natives of Charleston; and of these, forty-three were whites and five blacks—the latter were all children. No native adult black died of the fever. The average mortality in hospital practice was twenty-nine per cent; while that in private practice could not have been the one-half of one per cent. White children of all ages were attacked,—from three to four months up to fifteen and twenty years. *Native* children, of *foreign* parents, appeared to be more liable than those of *native* parents. Several native children, who had the disease in 1849 or 1852, had it again this year; a few of the number severely. Many adult foreigners, who had suffered an attack of the disease in a former epidemic, were attacked again; and, in a few cases, recently arrived strangers had it twice during the season. Very few, either white or black, native or foreign, acclimated or non-acclimated, were attacked after the climacteric period of life, say forty-five or fifty years of age. The proportion of recoveries after black vomit was greater than at any former prevalence of the fever. Of seventy-nine who had it in the Roper Hospital, nine recovered.

Prominent among the *exciting* causes of the disease, were a wetting by rain, and sleeping in the open air, either under an awning, or without any covering overhead. The shortest time in which exposure to the poison of yellow fever was followed by the effects, was *somewhat less than two hours.* The time intervening between midnight and six A.M., was the period of the twenty-four hours at which the disease generally invaded.

With regard to the *treatment* of yellow fever, Dr. Cain says, that the profession of Charleston has generally settled down upon the opinion that the disease cannot be *cured*, but *may* be *conducted* to a favorable termination. The sulph. of quinine utterly failed to act as a prophylactic in preventing an attack. The plan of treatment generally pursued was to evacuate the bowels at as early a stage of the disease as possible, by means of a mild cathartic, say calomel, or calomel and rhubarb, followed by Epsom salts or castor oil, care being taken to avoid ptyalism, which was found to be decidedly hurtful. Neutral mixtures were prescribed to act upon the skin and kidneys; blisters to relieve gastric irritation; opium, in some form, to allay jactitation, and induce sleep; ice in pellets, and, when tolerated, ice-water *ad libitum* was allowed. Food was given as soon as tolerated by the stomach, and stimulants every hour, or two hours, to keep up their effect, without allowing the secondary or *depressing* effect to recur.

As to the origin of the yellow fever in Charleston in 1854, Dr. Cain brings forward facts which, he thinks, exclude the agency of all terrestrial and meteorological causes in its production, and believes in its importation from abroad, in favor of which he gives a series of facts, connected with the arrival of vessels from Havana. But our limits will enable us only to record his opinion, without detailing the facts upon which it is founded. Dr. C. also records his opinion in favor of the contagiousness of the disease.

The Report of Dr. Fenner is occupied mostly with the subject of yellow fever; the cholera, the only other disease which was epidemic during the period embraced by the report, (the years 1854 and 1855,) being passed over with a few very general remarks at its close. Dr. F. says, that the yellow fever of these two years was fully as malignant at New Orleans as the memorable epidemic of 1853, and that the sufferers and victims would have been equally numerous, if there had been as many *susceptible* subjects exposed to it. The total mortality of the city for 1854 was eleven thousand three hundred and forty-seven, of which number two thousand three hundred and sixteen died of yellow fever; for 1855, the total mortality was ten thousand and ninety-six, of which number two thousand five hundred and ninety-eight fell victims to this disease. Dr. Fenner advocates the intimate relationship between intermittent, remittent, and yellow fever, considering them "as *varieties* of disease, springing from a common remote cause, which may be modified by various attendant circumstances in the earth, air, and human constitution, and thus produce a corresponding variety of effects."

With regard to the mode of communication of yellow fever, Dr. F. believes "that, under favorable circumstances, and within a limited region, the morbific cause may be conveyed from one place to another, and take effect upon persons thus exposed to it."

As to the *treatment* of the disease, Dr. F. says, that the general opinion of the profession in his neighborhood now is, that hitherto they have been giving too much medicine in yellow fever, while all that is necessary is to assist nature in the removal of the *febrific cause*.

He thinks that we may have been accustomed to attach too much importance to *post-mortem examinations*, and that we should study more carefully the nature of disease *during life*, and the effect of remedies upon it. Dr. F. found unexpectedly good effects from the use of the *muriated tincture of iron*, so boldly advocated by the late Dr. Wildman, of Savannah. The course pursued by Dr. F. was first, to evacuate the bowels with castor oil, or some other mild purgative, and then commence with the tincture of iron, in doses of twenty drops, diluted with cold water, every two hours. The effects of the remedy were, for the most part, satisfactory, and he thinks it deserving a further trial by the profession. An appendix to the report contains eleven communications on the subject, from physicians in different parts of the States embraced in it.

Annexed to Dr. Fenner's Report, is an interesting and valuable sketch of the fever of Norfolk and Portsmouth, Va., by the author, from personal observation. Dr. F. remarks, that suppression of urine was more common in the epidemic in those places than in any he ever witnessed, and was always of very serious import. When there was *total suppression* for twenty-four hours or more, it was as rare to witness recovery as from the worst form of black vomit. Dr. F. is not sure that he saw any effect in restoring the quantity, when very low, from any of the remedies which were used. Black vomit was exceedingly common in this epidemic, and there were numerous recoveries from it. Recovery from it was most common to the youthful, but several instances were seen among persons of more advanced age. Some of the most obstinate cases of this epidemic were marked by an almost perfectly *natural* tongue. In several cases, severe hunger was a prominent symptom, and such were very apt to terminate fatally. There were more deaths among the blacks of Norfolk than have ever occurred in any epidemic at New Orleans. Dr. F. has nothing new to offer respecting treatment, in connection with this epidemic. A great variety of plans were tried, as we should expect, from so many physicians, from different places, and with different views. The mortality was large under any treatment that was used. Dr. F. says, that "either the disease was *unusually malignant*, or the constitutions of the people had *less capacity for resisting its assaults*." He adds, "I thought I saw injurious effects from *over-medication*, but it was notorious that the opposite, or *do-nothing* system of the homœopaths was signally unsuccessful; and the survivors appeared to feel that their friends had been lost without a fair struggle against the destroying enemy." The average population of Norfolk, during the pestilence, was estimated at about six thousand, and the number of deaths at two thousand; but Dr. F. thinks that the mortality did not exceed one thousand six hundred. The mortality at the New Howard Infirmary, and also at the U. S. Naval Hospital, was about thirty-five per cent., or one in 2·80 of the admissions. Of about seventy physicians and second-course medical students, who went to the assistance of Norfolk and Portsmouth, twenty-one died.

The *origin* of the disease seems to be involved in doubt, opinions

being divided between two sources, viz.: a local cause, in connection with a peculiar constitution of the atmosphere, and a morbific germ imported by the steamship *Ben Franklin.* Dr. F. inclines to a belief in its local origin. With regard to its communicability, however, there seems to be a general concurrence of testimony to show that it was neither contagious nor infectious beyond the limits of Norfolk and Portsmouth. Numerous cases were removed to other places, and in not a single instance was it communicated to persons coming in contact.

The Report by Dr. Barton on the *Meteorology, Mortality, and Sanitary Condition of New Orleans,* for the years 1854 and 1855, was prepared for, and read before the New Orleans Academy of Sciences, but was accepted by the Committee on Epidemics, of the Association, as a contribution to the present volume, of which it is a valuable one. Its author is already very favorably known to the profession in connection with this branch of science, by the able report of the sanitary commission of New Orleans on the epidemic yellow fever of 1853, in that city, of which he was the chairman. His interesting and laborious observations would seem to establish the direct connection between specific climatic conditions and yellow fever, cholera, and "sun-stroke," as it is erroneously called; and, what is of great practical importance, that these conditions require an *adjunct* to produce their fatal results. For the development of yellow fever and cholera, filth or malaria is indispensable—no concentration of heat or humidity combined, being able to produce the first of these, and no variation of these with the drying power being able to produce the latter. Dr. B. says, "humidity, in conjunction with heat, is essential to the evolvement of all the higher grades of fever, and when filth or malaria is present, fever will certainly break out. The character of the fever will, in a great measure, depend upon the degree of temperature and humidity, the amount of filth, and the susceptibility of those exposed; from the Egyptian plague and yellow fever to typhus gravior and mitior and bilious fever." Dr. B. insists upon two general conditions as being everywhere necessary to the production of the great mass of zymotic diseases: the first and most important, which has been classed as terrene, embracing all filth in its widest acceptation; and the second, meteorological conditions. The first of these is within the control of legislative action, and something may be done even towards modifying the latter, as is shown by our author, to whose paper we must refer our readers for much interesting and valuable information connected with this subject.

The next paper is a short Report on *Strychnia, its Physiological Properties and Chemical Detection,* by Dr. Lewis H. Steiner, of Baltimore. The toxicological effects of this article on the system are illustrated by two cases: that of Pierre Daste, as given by Professor J. Cloquet, when the patient lived nearly three days; and that of Dr. Gardiner, of our own country, who died within three hours and a half. The tests mentioned for its detection are three, of which two only are strictly chemical, the third being based upon physiological properties, that lately suggested by Dr. Marshall Hall, of England, and founded

upon the susceptibility of live frogs to the influence of this poison. By immersion of this animal in any liquid containing strychnia for two or three hours, Dr. H. was able readily to detect the one-hundreth of a grain of the acetate in one experiment, and in some others, the one-five-hundredth, and even the one-thousandth of a grain, by means of the specific effects produced upon this animal.

A partial report upon a *Uniform System of Registration of Births, Marriages, and Deaths, and the Causes of Death*, is next given by Dr. G. S. Palmer, the committee appointed to report upon this important subject having been interrupted in their labors, in consequence of the death of their chairman, Dr. M. W. Wilson. Dr. P. has therefore only presented an outline as the basis of a law to be proposed in each State, when the present law is defective, or when there is no law at all. We trust that such measures will be adopted, ere long, as will secure an object so desirable as such a registration would be, and hope that the hint will be acted upon, if possible, that blank forms for this purpose should be prepared and circulated through the several States by the general government.

The concluding paper is the prize essay on the *Arterial Circulation, its Physiology, and Chief Pathological Relations*, by Dr. Henry Hartshorne, of Philadelphia. The physiology of the arteries is studied under the different heads of—1. Histological Indication, in regard to the smooth or organic muscular fibre, elsewhere; 2. Analogy, from comparison of the circulation of other animals of different types; 3. Observation of Accidental and Pathological Deviations; 4. Experimental Enquiries; and, lastly, Comparison of Theories. The summary result of the investigations of Dr. H. gives, as the most probable opinion or theory (in opposition to most recent authorities, but in accordance with the views of Hunter and Sir Charles Bell, and particularly with those of Carpenter,) that, as all the arteries have a muscular coat, this is endowed, like the other muscular tissues of hollow viscera, with a power of alternating contraction and relaxation; that this contraction is exerted in immediate connection with, and succession upon, the beat of the heart; *the arterial systole thus combining with that of the ventricles to make up the pulse;* that the variation occurring in different parts of the circulation is to be accounted for, to a considerable extent, although not entirely (a capillary power, or nutritive affinity, being also acknowledged), by the different degrees or kinds of *action* of the arteries; that the normal modes of stimulation by which these vessels are affected are chiefly three:—1. That of *distension*, from the impulse of the heart; 2. The stimulus of *oxygen* in the red corpuscles of the blood, by which all muscles are maintained in activity; and 3. The direct (*and reflex*) influence of the *nervous system*, by means of the arterial or vaso-motor nerves; lastly, that it is by the centres of the sympathetic system that the principal control is maintained over the arteries, as well as over the heart; while they are subjected also to influences directly transferred or reflected from the cerebro-spinal axis, and to some which result from contact with the external world.

The *plan of organization of the Association*, with the resolutions

adopted at its different meetings, and a list of the officers and permanent members of this body, close the volume, which we consider one of the most valuable that has yet been issued, and which bears internal evidence that this great plan for the advancement of medical science, and for promoting concentration of action and harmony of feeling in the profession, is in a state of progress and of promise. Long may it continue to exercise its elevating and purifying influence upon our profession, and through it, upon the health and welfare of our country and of the world.

H. D. B.

ART. IX.—*Digestion, and its Derangements. The Principles of Rational Medicine applied to Disorders of the Alimentary Canal.* By THOMAS K. CHAMBERS, M.D., Physician to St. Mary's Hospital, London. New York: Samuel S. and William Wood, 261 Pearl Street, 1856. 8vo. pp. 441.

THIS work consists of two parts, the first being devoted to the physiology of digestion, and the second to its derangements. This method of presenting a subject, is eminently adapted to give the reader correct ideas, and to make him a rational practitioner. We entirely agree with the author in the statement, "that in no way is both the science and the art of healing so likely to be improved, as by the association in its literature, and through that in the minds of its practitioners, of pathology with physiology, rather than with morbid anatomy:—that juster theoretical views are elicited by looking upon disease as a part of the phenomena of life, than as the producer of appearances seem after death."

The first part treats of normal digestion, the minute anatomy of each organ concerned in this process is given with its physiological action. Thus we have analyzed the structure and function of the mouth, stomach, small intestines, pancreas, liver, etc. We shall pass this portion of the work with the simple remark that each subject is carefully written, and the latest discoveries by the microscope, and organic chemistry are recorded.

In chap. X., of Book I., the author considers the "Physiological Action of Substances Submitted to Absorption in the Alimentary Canal." Foods are divided into the *complimentary* and *accessory*, the former are such as may become portions of the typical solids, and fluids of an animal body, the latter are of use in hastening, or arresting the metamorphosis of the organic structures. The best example of what the author calls *complimentary foods*, is milk, and of *accessory foods*, alcohol. The discussions of the physiological action of foods which follows this general division, is of great practical value, although many of the conclusions are scarcely warranted by the facts adduced.

The second book is devoted to the special derangements of digestion. The reader derives great advantage in the study of the diseases of the digestive organs, from a careful study of the preceding pages, on the physiology of digestion. In the treatment of the derangements

of digestion, the author lays great stress on the importance of the so-called *accessory foods.* These views are obnoxious to criticism, if not censure.

As a whole we regard the work of Dr. Chambers as not only an important addition to the literature of the physiology and diseases of digestion, but a most commendable effort to advance the domain of rational medicine.

ART. X.—*A Treatise on Therapeutics and Pharmacology, or Materia Medica.* By GEORGE B. WOOD, M.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania. Two vols., 8vo. pp. 840—901. Philadelphia; J. B. Lippincott & Co. 1856.

WE bring here to the notice of our readers a treatise from the pen of one of the authors of the *United States Dispensatory.* Perhaps a better exemplification than these volumes afford of the truth of the remark that "an author writes best on his favorite subject," cannot be more easily found in the history of American medical literature. Accustomed from almost the commencement of his professional life to pay peculiar attention to this branch of medical knowledge, the author has produced a work worthy of his high professional standing and the science he has so devotedly cultivated.

This work possesses a considerable fullness in all that concerns the effects of remedies, the nature of their operation, and their therapeutic application, but has no claims to be considered a complete exposition of the materia medica proper. It is divided into two parts; first, general therapeutics and pharmacology; and second, special therapeutics and pharmacology. To the consideration of the first part ninety-one pages are devoted, and one thousand six hundred and fifty pages to the second. The perusal which we have given this treatise has satisfied us that we can justly recommend it to all classes of our readers, and particularly to the younger portion of the profession.

ART. XI.—*Physical Exploration and Diagnosis of Diseases affecting the Respiratory Organs.* By AUSTIN FLINT, M.D., Professor of Theory and Practice of Medicine in the University of Louisville; etc. Philadelphia: Blanchard & Lea. 1856. 8vo. pp. 636.

THIS volume belongs to a class of works which confer honor upon their authors and enrich the domain of practical medicine. A cursory examination even will satisfy the scientific physician that Dr. Flint in this treatise has added to medical literature a work based upon original observation, and possessing no ordinary merit. The volume is divided into two parts. In the first, he treats of *Physical Exploration of the Chest;* and in the second, of the *Diagnosis of Diseases Affecting the Respiratory Organs.* The various topics discussed in the work are considered with almost exclusive reference to their direct clinical bearings.

ART. XII.—*The History, Diagnosis, and Treatment of the Fevers of the United States.* By ELISHA BARTLETT, M.D. Late Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the University of the State of New York, etc., etc. Fourth edition, revised by A. CLARK, M.D., Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons of the University of the State of New York. Philadelphia: Blanchard & Lea. 1856. 8vo. pp.

THE work of Dr. Bartlett, on the fevers of the United States has, from the issue of the first edition to the present, been a standard work with the profession. Aside from the character which the author's reputation would give to a work on any branch of practical medicine, this treatise has merits of a high order. It is in truth a model of classical diction, accurate investigation, and logical deduction. The three former editions passed under the hand of the author, each of which received from him a most judicious revision, and many additions.

The fourth edition has been supervised by his intimate friend and colleague, PROF. CLARK, of this City, whose relation to the author, and ample clinical experience, eminently qualified him for the task. The following extract from the editor's preface is a pleasing and elegant tribute to the memory of the lamented author :—"Sixteen months ago, he closed his brilliant professional career, after years of growing bodily weakness and pain; his mind not dimmed by his physical infirmities, but bright and comprehensive, glowing with the memories of the past, and the visions of the future. He died too soon for the profession he adorned. The clock had hardly marked twelve-at-noon, on the dial plate of life, when its pendulum strokes grew faint, and gradually fainter to the ear; and now, at length, when all is still, the hand that notes the hours points sadly upward, to indicate how much of day-time still remained to reap the harvest of affection and honor, in those fields, from which he had already garnered up so many golden sheaves. He died, alas! too soon. The whole profession are his mourners; for conspicuous as he had become by his medical writings, and his extended professional labors; his acknowledged worthiness, and his innate gentleness and modesty disarmed envy. He left no enemies. His mind and purpose were pure, almost beyond example. His high mental endowments were controlled and directed by a considerate judgment, and an earnest benevolent heart; and as the laws of refraction, wrought out into mathematical formulæ, enable the lapidary to construct the facets which open the fountains of the many colored diamond, so for him, cultivation and elegant taste had brought out the varied and winning native lights of his rich intellectual, moral, and social nature."

The present edition of Dr. Bartlett's work derives importance over its predecessors from the notes of the editor. From a somewhat cursory examination of the volume, we find these additions are numerous, and well designed to present the opinions of recent writers and their investigations of each individual subject. In addition to the results

of literary research, we have interspersed through the work, what will be more generally sought after, viz.: the editor's own views and experience upon many of the disputed points discussed by the author. The work as now improved, does honor to the medical literature of this country.

ART. XIII.—*Atlas of Cutaneous Diseases.* By J. MOORE NELIGAN, M D., Lecturer on the Practice of Medicine in the Dublin School of Medicine. Philadelphia: Blanchard and Lea. 1856.

THIS atlas is designed as an accompaniment to Dr. Neligan's work on the diseases of the skin. The illustrations are very fairly executed, and the atlas presents, in a convenient and cheap form, every variety of cutaneous disease.

ART. XIV.—*Obstetrics: The Science and Art.* By CHARLES D. MEIGS, M.D. Third edition, revised; with one hundred and twenty-nine illustrations. Philadelphia: Blanchard and Lea. 1856.

IN a cursory examination of this edition of Dr. Meig's work on Obstetrics, we notice that all late improvements in that branch are incorporated in its text. The general merits of this treatise are too well known to require acknowledgment at our hands.

ART. XV.—*The Dissector's Manual of Practical and Surgical Anatomy.* By ERASMUS WILSON, F.R.S. The third edition from the last and revised London edition. Illustrated with one hundred and fifty-four wood engravings. Edited by WILLIAM HUNT, M.D., Demonstrator of Anatomy in the University of Pennsylvania. Philadelphia: Blanchard & Lea. 1856.

THIS manual, we believe, is the most popular in use among students engaged in dissecting. It is convenient in form, while its arrangement, being for the most part that of Mr. Wilson's large work, now so generally studied, peculiarly adapts it to the student's necessities.

ART. XVI.—*Practical Anatomy. A new arrangement of the London Dissector, with numerous modifications and additions, containing a concise description of the Muscles, Bloodvessels, Nerves, Viscera, and Ligaments of the Human body, as they appear on dissection.* With illustrations. By D. HAYNES AGNEW, M.D., Lecturer on Anatomy, R.R. Philadelphia: J. B. Lippincott & Co. 1856.

THIS work has been prepared expressly for the student of Anatomy while engaged in dissection. It is a very convenient manual, and by its arrangement, is well adapted to the study of practical anatomy.

PART THIRD.

MEDICAL RETROSPECT AND EDITORIAL.

PRACTICAL MEDICINE.

Iodoform.—A new preparation of iodine, discovered by SEVILLAS and more especially brought to notice by M. M. DUMAS and BOUCHARDAT, possesses properties which promise to make it a valuable addition to our means of employing, with benefit, this important therapeutic agent. It presents itself in a solid state, in the form of small pearly particles, of a sulphur-yellow color, friable, soft to the touch, and with a very enduring aromatic odor. It contains more than nine-tenths of its weight of iodine. It is sweet to the taste, and is not corrosive.

It destroys animals in a smaller dose than iodine, after having produced more or less depression, and rarely produce vomiting. This depression is followed by a stage of excitement, convulsions, contractions, etc. Iodoform does not produce the least local irritation, not producing the slightest increase of vascularity of the mucous membrane of the stomach and bowels.

Its therapeutic properties are thus arranged: 1. In consequence of the large quantity of iodine which it contains, it can replace iodine and the iodides in all the cases in which these are indicated. 2. It is absorbed with the greatest facility. 3. It has the advantage over all other preparations of iodine of never causing any local irritation, or any of those accidents which render the suspension of iodine necessary in certain cases. 4. In addition to the properties it enjoys in common with iodine, it has advantages peculiar to itself: it allays pain in certain neuralgic affections, and produces a sort of local and partial anæsthesia of the rectum, when introduced into that organ. 5. It may be given in doses of from five to fifty centigrammes a day. 6. The principal diseases in which it has been employed with advantage are endemic goitre, scrofula, rachitis, syphilis, certain affections of the neck of the bladder, or of the prostate, and certain neuralgic affections. 7. It forms, with the greatest facility, most important pharmaceutic preparations.—*Arch. Gen. de Méd.*

Secondary Syphilis Treated by a New Preparation of Iodine.—The object of the paper by Mr. CHRISTOPHERS is to introduce to notice a new compound, which, combining the good effects to be derived from iodine, is devoid of its disadvantages—a preparation which, he says, has proved valuable in curing cases of secondary syphilis which had previously resisted the beneficial action of iodine in all its usual com-

binations and forms—a preparation, moreover, which does not produce the evil effects of iodine in those constitutions with which that substance is known to disagree. The preparation or compound is named "liquor cinchonæ hydriodatus," and contains in one fluid drachm of liquor, twelve grains of cinchonæ flav., and one grain and a half of iodine, in the form of hydriodic acid. Of this, the dose varies from one to three drachms, from which Dr. C. has not found any of the evil effects arise which smaller doses of other preparations of iodine have been known to produce. While using this compound in some of the successful cases treated, he also employed the hot-air bath, to which he attached much importance, in order to produce profuse sweating, and always with marked good effect. Indeed, he says he does not know a more potent remedy for intractable and inveterate cases of secondary syphilis than this is. This preparation is produced by exhausting the powdered bark with an aqueous solution of hydriodic acid; then with water; and the liquor is subsequently evaporated to the above bulk. —*Lancet.*

Effect of Belladonna in Arresting the Secretion of Milk.—Dr. Gooldens relates the following cases:—E. J., æt. 28, was admitted into St. Thomas' Hospital, with severe rheumatic fever, at the time she was nursing a child four months old, which was not allowed to remain with her. On the following day, although she had been freely purged, the breasts had become tumid, hard, painful, knotty, and extremely tender. The superficial veins were distended; some milk had been drawn, but the process was attended with great pain, and Dr. G. could not listen to the heart's sounds on account of the tenderness. The extract of belladonna was now applied over the areolæ of the breasts, in the same way that it is used to dilate the pupil of the eye. On the following day, Dr. G. found the breasts free from pain, and soft, and the secretion of milk arrested. In another case, in which the mother had weaned the child, the breasts became tumid, painful, and distended with milk. The extract of belladonna was applied to the areolæ, and in two hours she was perfectly relieved, and the milk absorbed.—*Lancet.*

Structure and Nature of the so-called Colloid Cancer.—In a paper recently communicated to the Royal Medical and Chirurgical Society of London, by Dr. Septimus W. Sibley, containing an analysis of nine cases of colloid cancer, observed by him, he draws the conclusion, that, so far as could be judged from the cases detailed by him, colloid was a disease perfectly *sui generis*, neither of a cancerous nature, nor frequently associated with cancer, and concludes with advocating the early removal of the disease when practicable, inasmuch as, if not radically cured by operation, there was abundant evidence that colloid was sure to return after excision.

Disease Peculiar to Workmen in Caoutchouc.—M. Delpech has lately called the attention of the French Academy of Medicine to a

peculiar disease of the workmen in caoutchouc, which has never been before described. The inhalation of the vapor of the sulphurate of carbon causes in them different forms of derangement of the digestive organs; a marked modification of intelligence, dullness, loss of memory, etc.; serious alteration of the functions of the nervous system, head-ache, vertigo, disordered sensations, more or less complete paralysis of motion, and especially almost perfect impotence.

Average Duration of Life in Patients with Scirrhous Cancer of the Breast.—Mr. Paget deduces from the statistics of one hundred and thirty-nine cases of scirrhous cancer of the breast, watched to their conclusions, or to their survivals beyond the average duration, and recently published in the *London Lancet*, that the proportion of deaths, in the first two years of the disease, is much less in those who are operated on than in those who are left; amounting in the former to less than eleven per cent., in the latter to more than thirty per cent.; more careful observations and a larger range of cases has led him to correct the statements made on this subject in his Lectures on Surgical Pathology, published in 1853.

Influence of Vaccination on the Rate of Mortality.—It will be remembered that vaccination, within a few years past, has been charged with increasing the mortality in France. It is asserted by the advocates of this new doctrine that, since the last century, the mortality in France, between the twentieth and thirtieth years, is doubled, and that this increase in the number of deaths is owing to the greater prevalence and fatality of *typhoid fevers*—that vaccination only spares life to make more food for that form of fever. Statistics, however, show that the general mortality in France, between the twentieth and thirtieth years, far from having doubled, or even increased, has, not only at that period, but at all ages, diminished since the eighteenth century.

SURGERY.

Two cases of Excision of the Knee Joint which terminated fatally.

Case 1.—G. P., æt. 18, was admitted into St. George's Hospital, November 14, 1855, under the care of Mr. Tatum, on account of strumous disease of the knee. The treatment which was adopted not affording him any material benefit, and his general health beginning to fail, it was determined to try the operation of excision. On the first of last May an H shaped incision was made: the patella was turned up in the upper flaps, but not removed, as it seemed healthy. About half an inch in thickness of the end of the femur, and rather more of the tibia, was sawn off. The parts were reunited by sutures, and the limb put upon a ham-splint. The synovial membrane was found greatly thickened, the joint disorganized by suppuration in its cavity, the bones, partially denuded of their cartilages and unnaturally vascular, (especially

the tibia) but healthy, where cut through. Considerable typhoid fever and great pain in the part followed the operation; the discharge was very profuse, and union did not proceed very satisfactorily; the granulations were pale, the matter curdy and offensive. On the fourteenth day he had a slight rigor, and complained of pain in the sound leg and a little cough. The symptoms of secondary suppuration, soon became confirmed, and he died on the seventeenth day.

Case 2.—R. D., æt. 15, was admitted January, 1856, under the care of Mr. Cutler, for chronic synovitis of the left knee. There was much heat of the part, great swelling of the synovial membrane, which a large quantity of fluid, and extreme tenderness on pressure. An incision was made which gave vent to a large quantity of serous pus, but it was not followed by any permanent benefit; and as the patient's health was failing, it was resolved to expose the cavity of the joint freely, and remove the diseased bone. On the 17th April, a curved incision was made, running parallel to lower border of the patella, which bone was turned back and the joint exposed; the diseased portion of the bones were removed. No symptoms followed the operation, which seemed to give complete relief from the pain in the knee. The swelling, however, did not subside, and the discharge showed no tendency to cease. The boy remained in the hospital two months, and as he was losing flesh, he left and went to the sea-side Gradually getting worse, he returned to London, and a month subsequently he died.—*Association Med. Jour.*

Hæmorrhoidal Tumor Removed by the Ecraseur of Chassaignac. By H. Terry, Esq., Surgeon to Northampton Infirmary.—The patient had for several years suffered from a large and painful hæmorrhoidal tumor: it was about the size of a hen's egg, covered with condensed mucous membrane and cellular tissue, and disposed to bleed. Previous to the receipt of the *écraseur*, an attempt was made to strangulate the tumor by applying a tightly drawn ligature: this was followed by excessive pain and fearful general collapse, so much so, that large doses of opium and brandy had to be administered. This operation not succeeding, a second was performed nine days afterwards, which was likewise followed by severe pain, but no collapse. In a few days a portion of the tumor came away, leaving the largest part behind. The *écraseur* had now arrived, and I determined upon attempting to finish the case by its application. Chloroform having been given, the tumor—about the size of a nutmeg—was drawn out by its ligature, and the chain put round its neck; the chain was drawn down till it was in close contact with the part, when the racket action of the instrument was begun, tightening the chain by one notch every fifteen seconds. In two minutes and a half —i.e. by ten actions of this most ingenious contrivance—the tumor came off. There was hardly a drop of blood, and a small, clear, healing surface remained; the patient having no pain. He was able to get up the next morning.—*Assoc. Med. Jour.*

Obstetric Selections. By GEORGE T. ELLIOT, JR., M.D.

Nymphomania:—M. TABER (Würtemberg *Med. Corresp. Blatt*) reports the following interesting details:—"The patient was forty-eight years of age, the mother of many children, and, for the last twenty years of her life, in widowhood. From her youth, she was addicted to onanism. The ergot of rye had given more relief than any other treatment, at the rate of 3 ij. in the twenty-four hours. Her sexual desires ceased thirty-six hours before death. On *post-mortem* examination, the body was found much atrophied; between the corpus callosum and the tubercular quadrigemina; a hydatid, as large as a nut, was found closely attached to the choroid plexus. Tubular structure of the kidneys much congested. Uterus enlarged, with indurated cervix, and very patulous os. Vagina smooth, and parchment-like. Ovaries healthy.—*Revue de Thèrap. Med. Chir.*, October."

Puerperal Tetanus.—In the three years, ending December 1853, no less than two hundred and thirty-two women are recorded as having perished from this disease in Bombay; and it would appear as if it had been on the increase, as from thirty-eight deaths from this disease, in 1851, we rise to eighty-seven in 1852, and one hundred and eight in 1853. A considerable increase of the mortality took place towards the close of the rains, thirty per cent. of the number dying in the last three months of the monsoons, (August, September, and October,) while in the three months immediately preceding the setting in of the rains, (February, March, and April,) only fifteen per cent. of the deaths occurred. Dividing the year into the two seasons—wet and dry—the proportions stand thus: Wet season, (May to October inclusive,) one hundred and twenty-seven deaths, or 54·4 per cent. Dry season, (November to April inclusive,) one hundred and six deaths, or 45·5 per cent.

During the same period, the number of deaths by puerperal fever were twenty-one; by puerperal convulsions, two; by phlegmasia dolens, one.

It appears that the liability to tetanus, greatly diminishes after the sixth day, though it continues up to the eighteenth day after delivery. The number dying during the first six days amounting to one hundred and forty-five, leaving only eighty-eight to be distributed over the remaining twelve days. During these three years, six deaths of trismus nascentium are recorded

Excluding the puerperal form of tetanus, it appears that there still remain nine hundred and twelve deaths from this disease out of forty-two thousand six hundred and fifty-one deaths in the town of Bombay, or one from tetanus to forty-six from all other cases.—*Brit. and For. Med. Chir. Rev.*, October. p. 558.

Cases of Nymphomania. By HORATIO R. STORER, M.D., Physician to the Boston Lying-in Hospital.—*Am. Jour. of Med. Sciences*, October, 1856.

Case 1.—M. M., æt. 20; thick set and excessively plethoric; unmarried; but confined in 1855; no apparent predisposition to disease.

September 20, 1853, she applied to Dr. Salter, with the confession, that, with the aid of a bed wrench, she had forced a cork into her vagina. On the third examination this was removed with much difficulty from its "bed" "a little back of, and in contact with" the os uteri. "Leucorrhœa, which had formerly been profuse, continuing, and there being some symptoms of metritis, she was advised by Dr. Salter to enter the Massachusetts General Hospital," which she did one month after the operation. She was then flowing, but not profusely, had great pain in back, limbs, and head, with both dysuria, and incontinence of urine. Abdomen tympanitic, exquisitely tender on pressure; but pulse only 92, and rather feeble. Left the hospital November, 1853, not relieved, and sought a female friend, by whose advice "instruments" were introduced, which she found herself unable to extract; and December 9th entered Dear Island Hospital, where she was relieved" by Dr. Moriarty, who cured her of pleurisy, and removed three pieces of German silver spoon from her vagina. Left Dear Island Hospital April 8, 1854, and re-entered Massachusetts General Hospital, June 13, with persisting leucorrhœa and dysuria.

August 24. Hair-pin and ordinary pin removed from bladder, by Dr. Bigelow.

September 3. Another hair-pin followed by symptoms of peritonitis.

October 2. Fragment of third hair-pin.

Left November 5, symptoms having abated. Remained under Dr. Bigelow's care for some time subsequently. Confined September, 1855. Came under Dr. Storer's care March 25, 1856, complaining of "cough of three years standing, leucorrhœa, dysmenorrhœa, and dysuria, with constant pricking in region of bladder; thinks she has at times prolapsus uteri; great difficulty in micturition." Vaginal and vesical examination gave no satisfactory results; but cross-examination elicited some statements, which led to a knowledge of the operations performed by Dr. Bigelow. The patient being then etherized, (April 9,) Dr. Dupee removed "a long piece of copper-wire, broken and twisted on itself several times, and seemed to have been imbedded in the anterior wall. The operation was followed by considerable hæmaturia."

April 16. Dr. Storer removed the greater portion of a hair-pin twisted on itself.

April 23. Dr. Dupee removed another fragment of a hair-pin.

April 29. Nothing more could be detected, and patient transferred to Lunatic Asylum.

May 30. The removal of these foreign bodies was effected by ordinary dressing forceps; the cough, leucorrhœa, and dysmenorrhœa had yielded to treatment. The suspected prolapse of uterus was prolapse of the anterior wall of the vagina.

June 21. Re-applied to Dr. Storer for relief for the same pains in the neighborhood of the bladder, but that gentleman declined to assume further responsibility, believing that "merely palliative treatment without restraint would be useless." Clitoris not at all enlarged.

Case 2.--Mrs. B., æt. 24; under size; gross habit; pale and pasty complexion; in easy circumstances; married at 17; no children; has never miscarried; in tolerably good health; menstruates regularly, but scantily, and with some difficulty; trifling leucorrhœa. "For several months has been troubled by bad dreams, excessively lascivious in their character; can hardly meet or converse with a gentleman, but that next night fancies she has intercourse with him; has frequently such thoughts by day, sometimes when in conversation; thinks that she would at once repel an improper advance on part of any man, and is not conscious of ever having shown to any such what was passing in her mind; is much afraid that, if further increase of malady, may not be able to restrain herself; at such times is conscious of a spasm within genitals, and of the emission of a mucous jet, one or more drops, which stains linen; this emission did not occur at first, but now always takes place; does not think that her husband has missed having connection with her a single night since her marriage, even at times of menstruation—frequently three times in a night, and always with a seminal emission." Has always lived well herself, meat three times each day, brandy at dinner; enjoys intercourse greatly; is conscious of most excessive local excitement; thinks that present excess arose from desire for children; has never masturbated; is sure that, if her husband should restrain herself, she could not keep from him; has tried it. Examination disclosed no facts bearing on the disease, but excessive irritability in the neighborhood of the clitoris, "gentle touch causing her to shriek out, not with pain, as she herself said, but with excitement; acknowledges constant itching in that region." Total abstinence from sexual intercourse ordered, with unstimulating diet, cold baths and enemata; solution of borax to anterior commissure; hair pillows and mattress in place of feathers; ʒij doses nightly of equal parts of tr. of val. hyos. and lupulin. ferri sacch. carb. gr. jss, ter in die. A month later, she had passed several days without the dreams or the emissions, and with much diminution of the local heat and irritation.

[We were told by a physician in Paris, that he was once required to make a speculum examination of a sister of charity; when he noticed a distinct jet to occur at the moment when he was about to introduce the instrument. Some months subsequently he was again desired to repeat the examination, when, anticipating the phenomenon, he watched attentively, and witnessed it for the second time. He had no doubt, that it came from one vulvo-vaginal gland.—G. T. E., Jr.]

Sterility.—New Orleans Med. News and Hosp. Gazette, September.—A negro woman, æt. about 30; married at 17; had never been pregnant, and had exhausted her physician's routine of practice. Directed to allow a newly born infant to be applied to her own nipples. This was faithfully done for four days; and about nine months subsequently the woman gave birth to a "fine, full-termed girl child."

Tincture of Iodine in the Vomiting of Pregnancy.—Preuss. Ver. Zeitung.—As quoted in the *Edinb. Med. Jour.*, October. p. 368.—Dr.

Eulenberg, of Koblenz, says that this remedy, even in very small doses, is a most efficacious agent in arresting the troublesome vomiting which so often occurs in pregnant woman. He orders the tincture in a very dilute form (tr. iodine ℈j., spts. vini. rectif. ʒiij.) and small doses, three drops several times a day in water. The cardialgia accompanying this morbid condition is also relieved by it. Dr. E. alleges that other sympathetic irritations and neuroses of the stomach, are alleviated by similar treatment. He has not found the iodide of potassium as equally serviceable in the affections alluded to.

Case of Puerperal Tetanus.—Glasgow Med. Journal, October.—Dr. R. Paterson reports the details of a case in the person of a woman who had given birth to her fifth child after a natural and easy labor, lasting four and a half hours; July 3, 1855. On the 10th, the Dr. ceased his visits, as her recovery had been uninterruptedly good; and on the 17th he was called to prescribe for uneasiness and rigidity of the muscles of the neck and jaws, ascribed to cold. Ordered ℈j of Dover's powder.

July 18.—More difficulty in opening the mouth. Powder repeated, with liniment of chloroform and laudanum.

July 19.—Worse. Blister to nape of neck; iodide of potassium and morphia—quantities not stated.

July 20.—Tongue cannot be protruded beyond the tip. Great difficulty in making herself understood. Can suck beef-tea through her teeth, and then swallow with considerable ease. Turpentine and soap injection; five to eight drops of hydrocyanic acid, with the morphia as before. In the evening, swallowed with some difficulty; bowels not moved. Dr. Pagan called in, who advised a thorough, opiate plan of treatment; to have the injection repeated, and after its operation ʒij of laudanum every three hours by enema.

July 21.—Had intervals of sleep; slight emprosthotonos with pain in præcordium; dorsal muscles tense. ʒiij of laudanum as before. In the evening. Has had a few intervals of repose during the day. Other symptoms unchanged, but drowsy, and mutters that she could sleep were it not for the jerking and twitchings. Repeat turpentine enema, and after its operation the laudanum injections as before.

July 22.—Has had occasional short sleeps; feels more comfortable; general rigidity much diminished, notwithstanding a few spasmodic attacks of an opisthotonic character while assuming the sitting posture, which she is now under the necessity of doing when nourishment is administered. Continue treatment.

July 23.—Better to-day; some hours sleep; spasms by no means so frequent, and rigidity diminished; can take her beef-tea more conveniently. Continue treatment. Evening.—Severe opisthotonos with excruciating pains traversing the whole muscular system; breathing laborious; abdomen much distended, and hard as a board; spine describes a curve, and tendons of all the flexor muscles like tense whip cords; much exhausted; has perspired immeasurably; and, as intelligibly as possible, communicates that her thirst is distressing; every attempt to swallow increases spasm—this attack came on while attempt-

ing to assume the sitting posture for a change of position. Wine and any nourishing fluid; laudanum enemata increased to four teaspoonfuls every three hours.

July 24.—Ten A.M.—Symptoms not improved; injections not well retained; has had several severe spasms; tongue lacerated; spine still arched; abdomen protruberant and tense; nurse says that during some attacks the occiput and heels were the only supporting points of the body; respiration more free. Two grains of morphia in suppository every four hours. Half-past two P.M.—Spasms less severe; spine less arched; abdomen less tense and protruberant; complains most of tightness and rigidity of arms and legs, the tendons of which, even to fingers, are at present fixed. Suppository now, and ʒiij of laudanum at seven P.M. in enema. Ten P.M.—No sleep; drowsy; articulates better; easier; spasms less frequent; muscular system more relaxed; præcordial pain, and abdominal uneasiness much abated; Can open the mouth a half inch, and swallows with comparative ease. Suppos. of opium gr. ii now, and the laudanum injection every four hours.

July 25.—Ten A.M.—Better night; speaks with ease, and says that she feels much revived after refreshing sleep; tetanic rigidity almost subsided; has taken much nourishment; thinks that the effects of the enemata are those of the suppositories. Laudanum every five hours. four P.M.—Unusually exhausted; spasm of dorsal muscles on slightest noise; discomfort in deglutition; tympanitic distension of bowels. ʒj, tr. fœtida ʒij, tr. valerian, to each enema. Eleven P.M.—Fast asleep on her sides; awoke suddenly when touched and had several mild attacks of opisthotonos; nurse states that at seven P.M. there was a general convulsion of frightful character; intellect remaining unimpaired; elevated to the sitting posture with much difficulty, when the stiffness gradually passed away in a few opisthotonic spasms. Suppository as before. Sleep not to be disturbed on any account."

July 26.—Ten A.M.—Slept from half-past eleven P.M. till two A.M., this morning, when a similar paroxysm occurred, but less severe in its character. Slept again for four hours; muscular rigidity generally has much diminished. Intermit suppository, ʒij laudanum every four hours in enema. Ten P.M.—Much better, refreshed; several hours sleep. Continue treatment.

July 27.—Ten A.M.—Several attacks of opisthotonos during the night; diminished in intensity and duration; if anything feels better; turpentine enema, to be followed by the opiate. Eight P.M.—Has had a sharp attack of opisthotonos; at present feels much better, and expresses some confidence in the prospect of recovery; deglutition comparatively easy, and the muscular system, with the exception of the larger tendons of the inferior extremities, in a satisfactory condition; can sit up, and support herself by a cord attached to the bed-post; bowels have been freely moved; ʒij laudanum, as before.

July 28.—Half-past three A.M.—Apprized that Mrs. H. was dead or dying: died before the doctor could arrive. The corpse lay supine, stiff, and arched; the occiput and heels being the points d'afferi. The patient had felt so much better, that after a draught of beef tea at one o'clock, she had requested the nurse to go to sleep; the nurse lay

down beside her and was awakened by a loud gurgling noise, when the messenger was dispatched for the doctor. No *post-mortem* could be obtained.

Case of Locked Twins, in which both children were born alive. Communicated to the Edinburgh Obstetrical Society, by JAMES B. BALFOUR, M.D.—On the 18th March, 1854, I was called upon to visit M. M., æt. 30 years, in her second pregnancy. I reached the house about five A.M., and found that the membranes had ruptured about two A.M., and since that, labor had gone on strongly and steadily; and, shortly before I came, I was told that something had begun to protrude, external to the vagina, which, upon examination, I found to be both feet of a child which were already in the world. A few pains brought down the lower part of the body, when suddenly, and unaccountably, the progress of the child's birth was arrested. The child was coming with its abdomen presenting towards the sacrum of the mother. On finding its progress stopped, I made an examination, and found the head of a second child, filling the pelvic cavity, with the occiput occupying the hollow of the sacrum, and the face resting on the upper part of the chest and the neck of the first one, the chin being just below and in apposition with the chin of the first child, which remained at the brim of the pelvic, being thus prevented entering the cavity. Happening to have my short forceps with me, I immediately applied them to the head of the second child; and, while using them, I employed slight traction on the first child, by grasping it by the legs, which I drew slightly forward. Without much difficulty, I succeeded in abstracting the head of the second child; and, in doing so, the head of the first descended into the cavity of the pelvis, again locking them in a similar position to what they were at first, only that now it was the head of the first which prevented the body of the second from descending. I now held the head of the second child as well back as possible, and having grasped the limbs of the first, I exerted gentle traction, and the head very quickly glided beneath the arch of the pubis, and the child was born, after which the second was easily and quickly delivered. They were both female, and appeared to be fine healthy children, but they were decidedly below the average size of twins, and I was inclined to think they were a few weeks premature. Both did well, and were in good health when I ceased attendance.—*Edinburgh Med. Jour.*, Sept.

CORRESPONDENCE.

FONTAINEBLEAU, September 1, 1856.

Editors of *New York Journal of Medicine.*

DEAR SIR:—For six weeks past I have made frequent visits in the hospitals of the environs, extending some thirty miles around Paris, more particularly at Montes, St. Germain, Versailles, Melun, Montereau, and Fontainebleau.

One cannot desire a more hearty welcome than that offered in these

institutions to the voyaging physician. The usual medical and surgical service is from seven to nine in the morning. At St. Germain were made the first applications of the apparatus invented by Dr. Martin, of Paris, for the treatment of fractures of the thigh, by which extension and counter-extension are secured from the calf of the leg and the hip, reposing on cushioned pads. This apparatus is similar in principle to that manufactured by H. H. Mason, of Springfield, Vt., (of which I am sorry to have forgotten the name of the inventor,) but in its details somewhat different. I hope you may soon see their comparative application at the New York Hospitals, that an apparatus, so good in principle, may embrace every desirable modification.

During the last days of July there were frequent cases of insolation; some of which occurred among the soldiers recently from the camp of Boulogne, a part of the army of the North, under Baraguay d'Hilliers. This detachment arrived at Paris by railroad, and thence marched, July 31, for Poissy; and when near St. Germain, several fell senseless; six of whom were borne to the hospital. These were all treated by general venesection, leeches to the back of the neck, ice to the head, sinapisms to the extremities, lemonade diet, aperient lavement; and after seven days of repose, four left the hospital the morning of my last visit, when the remaining two were convalescent.

At St. Germain, the civil and military hospitals are united; but at Versailles, these form two separate establishments: the military being near the palace in a building formerly known as the "*Grand Commun*," containing one thousand rooms, in which no fewer than three thousand persons were lodged when the court resided at Versailles." Of course the interior has been somewhat changed to suit its present use.

The civil hospital is ample; but that which especially attracts the attention of the visitor, is the splendor of the rooms appropriated to pharmaceutical purposes. And, in this connection, he can but regret that so little has been done to facilitate the proper ventilation of the wards of the sick.

Among the patients of the greatest interest were three or four cases of the successful application of electricity, for the cure of paralysis.

For about two weeks I have been at Fontainebleau, a city containing eight thousand five hundred inhabitants, and surrounded by a forest, some twelve miles in diameter, producing almost every variety of trees of the temperate zone, diversified with mountain ridges, gorges, valleys, and plains, and presenting to the thousands of enchanted visitors, picturesque, wild, and romantic views, which, if they have not the awful grandeur and sublimity of our *Adirondac Gorge* and *Tehawian Heights*, do, by their access and proximity to gardens, parks, terraces, and parterres of exquisite beauty, form an animating contrast, which, with the good air, water, milk, unpressed chasselas, and other essentials found here, fortify soul and body. At a little removed from the city, and very near this forest, is located one of the most inviting hospitals yet visited, whose administration, surgeons and physicians, by their welcome reception and polite attentions, add not a little to render the stranger's visit agreeable and profitable.

There might be mentioned several cases of contusions and other

wounds, of which the cures are at once honorable to surgery, and illustrative of the benefits of good air in the treatment of disease.

Yours truly,

DAVID P. HOLTON.

SUBSTITUTE FOR COD-LIVER OIL.

NEW YORK, Nov. 26, 1856.

To the Editors of the *New York Journal of Medicine:*

GENTLEMEN:—I wish to direct attention to the oily substance taken from the cavities in the head of the spermaceti whale, known in commerce as the head-matter. In summer, it presents the appearance of oil with a copious white fleecy sediment; but in winter, when chilled, resembles imperfectly frozen ice-cream or beef-drippings. It may be obtained from the manufacturers of sperm candles, and should be used while fresh (in its crude state as landed from ship-board), becoming rancid by long keeping. Ol. ethal would be an appropriate name for this substance as being composed mostly of oils and ethal, the peculiar base of spermaceti. "The spermaceti itself consists of two atoms of margaric acid, one atom of oleic acid, and three atoms of ethal. The ethal is remarkable for its analogy, in composition and properties, to the bodies of the alcohol group."—KANE'S *Chemistry.*

It is preferable to the cod-liver oil, on account of being more agreeable to the taste, leaving a pleasant flavor in the mouth, and also being more nutritive and soothing. It is also less apt to disagree with the stomach, and does not cause offensive eructations. The patient may take it either pure, in coffee, or with bread, boiled rice, potatoes, etc. When required, tr. opii camph. and syr. ferri iod. may be added.

Yours respectfully,

G. P. CAMMANN.

MESSRS. EDITORS.—Will you publish the accompanying card in the *New York Journal of Medicine*, and oblige,

Yours respectfully,

G. P. CAMMANN.

A CARD.—*The Double Self-adjusting Stethoscope.*—Being informed that Dr. Marsh, of Cincinnati, complains of my having infringed the patent of his double stethoscope, I would state that,

1. Dr. Marsh's instrument and mine differ essentially one from the other both in principle and construction.

2. I wholly disclaim any intention of interfering with the rights and interests of Dr. Marsh. I have never received any advantage from the sale of my stethoscope, but presented it free to the profession. Dr. Marsh has remained perfectly quiet for two years from the first appearance of the double self-adjusting stethoscope, and now, when the period has elapsed within which I might have secured myself by patent, if so inclined, his aim and endeavor seem to be not to dispose of his *original patented instrument*, but to avail himself of mine with all its *improvements and adaptation to practical purposes.* Is the

Profession, then, prepared, on the *ipse dixit* of Dr. Marsh, to sustain him in the sale of my stethoscope under restrictions, when he has not taken the usual course to establish his legal right so to do. He certainly cannot acquire the moral right to receive the benefit of other men's labors.

3. Dr. Marsh's stethoscope appears to be but a modification of other instruments long known in Europe and now in my possession.

The above statement, including the opinion that my stethoscope is not an infringement of Dr. Marsh's patent, is made under advice of eminent counsel.

G. P. CAMMANN.

NEW YORK, Dec. 2, 1856.

BELLEVUE HOSPITAL, Dec. 13, 1856.

Editors of the *New York Journal of Medicine.*

By request of DR. JAMES R. WOOD, I desire to correct a statement in regard to a case, which I reported from his service, in your Journal for September. The case was malignant disease of the right superior maxilla, which Dr. Wood treated by applying a ligature to the right common carotid. The operation proved very successful, the tumor gradually subsided until nearly all external evidences of disease had disappeared. In my report, which was made in Dr. Wood's absence, it was stated inadvertently that the cure was complete. The patient was discharged in the early part of September; the face being quite free from disfigurement. He was readmitted; the tumor having again made its appearance; the collateral circulation being partially established. At the present time, the tumor is gradually increasing, although it is not nearly as prominent as before the operation. Dr. Wood is about to ligate his left common carotid, the result of which will be given.

Very respectfully,

FRANCIS V. WHITE, M.D.

House Surgeon to Bellevue Hospital.

Case of supposed Poisoning.—On Friday, July 3, 1856, it was reported that a female, residing at No. 63 King street, was lying dangerously sick, from the effects of poison administered to her, for the purpose of obtaining a large sum of money which she was supposed to have obtained from a railroad company. One of the lawyers acting as her counsel in the suit against the company being charged with the crime.

She was found in bed partially insensible, but easily aroused, so as to recognize those around her. By signs she intimated that the stomach was the seat of her greatest distress, complaining also of her throat and head; she made several attempts to speak, but could not articulate. The first physician called in administered an emetic, which vomited her freely. A cup was found in the room containing a small quantity of white and brown sediment, which was pronounced to be opium and arsenic. Several physicians being called to see the case,

all were of opinion that the patient was suffering from the effects of poison.

The Coroner was notified to hold an *ante-mortem* examination, as she was reported to be dying. He at once proceeded to the house to take her statement. She gave him to understand that she was poisoned by her counsel, and that he had stolen her papers.

A jury was empaneled to investigate the circumstances of the case. Several witnesses testified to seeing the legal gentleman in the room of Mrs. P., a short time before her illness, the testimony of four medical men was to the effect that Mrs. P. was suffering from the action of an irritant and narcotic poison. In view of the correctness of these statements, the Coroner issued a warrant for the arrest of the legal gentleman, and he was at once committed to prison to await the result of the inquisition.

A portion of the vomited matter, and the contents of the cup containing the supposed poison, were sent to me for examination, with a request that I would testify in the case at ten o'clock the next morning.

A careful chemical analysis failed to determine the presence of either arsenic or opium; the brown and white powder proved to be jalap and bitart. potass., which had been administered to Mrs. P., by the legal gentleman, at the request of an old man who was called in to see the lady when she was first taken ill.

My testimony before the Coroner was, that no poison could be discovered in the several substances placed in my hands for examination; that Mrs. P. was probably suffering from congestion of the brain; and the distress in the throat and stomach was due to the free use of emetics administered by the medical attendants, with a view to empty the stomach.

The case was then submitted to the jury, and five were for a conviction, and one for an acquital (six constituting a coroner's jury).

As several hours had elapsed without any prospect of the jury agreeing, the coroner discharged them, giving notice that he would empanel a second jury in the morning. The next day the inquisition was resumed at the Eight Ward Station House, the excitement in the neighborhood being kept up by constant visitors, both to see Mrs. P., and also to see the accused.

A careful consideration of the case by an intelligent jury, at once decided that there was no poisoning in the case; that the gentleman charged with the crime had visited Mrs. P. with no intention of doing her harm; that they gave her some medicine while she was partially stupid from congestion of the brain; that this proved to be pulv. jalapa. comp., which the other medical attendants mistook for arsenic and opium. They were at once discharged from custody, being confined forty-eight hours by the negligence of medical men, in believing the statements of persons who suspected poisoning without using their judgment in comparing the symptoms with the history of the case. Mrs. P. recovered completely in a few days, she still believes that the pulv. jalapa. comp. is a severe poison, and that she was very near dying by it.

Coroners' inquests are frequently held in cases where parties have

been charged with the administration of poison, and in almost every case, it turns out that the deceased came to his death by natural causes. Medical men should be carefully on their guard, and not let the statements of interested parties influence them in forming an opinion of a case, although they may not be able to get any other account of the probable illness of the patient at the time of their visit. The case before us illustrates the importance of attending to this point, for if any of the medical gentlemen in Mrs. P's case had considered for a moment, they would have readily detected the absence of several conditions that indicate the actions of poison, either of the irritant or narcotic variety.

T. C. FINNELL, M.D.,
Surgeon to St. Vincent's Hospital.

MISCELLANEA.

Bellevue Hospital as a Clinical School.—The location of Bellevue Hospital in the immediate vicinity of the medical schools of our city, and the facilities which are afforded to students, for acquiring practical knowledge of disease, are attracting to its wards an unusual number of students. During the present session, three hundred and seventy-six tickets of admission have been issued, and not unfrequently its large theatres are filled to overflowing.

In addition to the usual daily clinical instruction, Dr. J. R. Wood is giving a course of lectures on Surgical Anatomy and operative surgery, in the new Pathological Building, which is largely attended.

DR. G. C. E. WEBER.—We are pleased to learn that GUSTAV C. E. WEBER, M.D., of this city, has been appointed Professor of Surgery in the Cleveland Medical College (O.), in place of Professor ACKLEY. Dr. Weber is son of the eminent German Anatomist of that name. The rare advantages which he has enjoyed for acquiring a knowledge of his profession were not allowed to pass unimproved, as his occasional contributions to this journal abundantly prove. He was in the enjoyment of a large practice in this city, and was justly esteemed one of our most promising surgeons. He will prove a valuable accession to the Cleveland school.

DR. BROWN-SÈQUARD.—This distinguished physiologist has recently given in the University Medical College of this city three lectures on some of his recent researches in physiology, and more especially on some new views touching that interesting subject the Supra-renal Capsules. We are happy to hear that Dr. Brown-Sèquard was welcomed by a large class.

Prizes for Anatomical Preparations.—We desire to call attention to the fact that DR. JAMES R. WOOD has offered to the students of the three medical colleges of this city, two premiums, one of $50, and the other of $25, for the two best anatomical preparations, prepared and presented by them to the Museum of Bellevue Hospital. The

decision on the merits of the several preparations is to be made by the respective surgical and anatomical professors of the colleges, and a suitable testimonial to the successful competitors is to be given signed by said professors.

A New Work on Ethnology.—We have received the prospectus of a new work on Ethnology, by JOHN MCELHERAN, Member of the Royal College of Surgeons, Edinburgh. Mr. McElheran has been pursuing his researches in this country for several years, finding in the mixture of races which our population presents, unusual facilities in the prosecution of his enterprise. From the exposition of his views, and the results of his investigations which we have learned from the author's lectures and papers, we believe that this volume will excite a general interest among scientific men.

The first edition will be published by subscription. Price $5, quarto form. Subscribers will remit to D. Appleton & Co., Broadway.

Medical Schools and Profession in America.—We take pleasure in presenting our readers with the following notice of Dr. F. CAMPBELL STEWART'S discourse before the Medico-Chirurgical Society, of Edinburgh, on the evening of the 2nd of July last:

The business of the evening was the reading of an elaborate paper by Dr. F. Campbell Stewart, of New York, on the medical profession and medical schools in the United States. The paper, which was followed by the Society with marked interest, gave an account of the organization of the profession in America, of its relations with the State, of the medical societies, colleges, and universities, of the hospitals and other medical charities, of the irregular practice and quackery, finally, of the state of medical and surgical practice generally across the Atlantic. Much amusement was excited by the description of the numerous devices adopted by irregular practitioners to attract notice; and particularly by the narrative of the successive impositions practiced by the so-called "consumption-curers" upon an intelligent victim of that disease, whose case, as given by himself, was detailed by Dr. Stewart. The union of high intellectual qualities, and particularly of an aptitude for metaphysical research, with the weakness which render men the ready victims of quackery, was pointed out as receiving abundant illustration in the United States. The certificates of the clergy are everywhere sought as the best introduction to practice, and their services are often rendered on far too easy terms, to the propagation of the grossest forms of imposture. Dr. Stewart, however, expressed his opinion that, on both sides of the Atlantic, the best portion of the clergy maintained the most friendly relations with the corresponding portion of the sister profession. The details given of the vast establishments connected with the superintendence of emigration were of the most interesting character; and the entire paper was undoubtedly calculated to convey most favorable impressions as to the growing intelligence, the rapidly increasing organization, and

the high moral and educational status of the profession, especially in the public services of the United States. Dr. Stewart concluded with an interesting account of the chief professional labors of the oldest and most distinguished of living American surgeons, Dr. Valentine Mott, of New York, who, though upwards of seventy, still continues to perform operations of the most daring and successful character, and to maintain thereby a reputation which is not less than world-wide.

On the moton of Dr. ANDREW WOOD, President of the Royal College of Surgeons, seconded by Dr. CHARLES WILSON, a hearty and unanimous vote of thanks was accorded to Dr. Stewart for his paper.

Western Lancet.—With the commencement of this year, our old colaborate, Dr. GEO. C. BLACKMAN, becomes the sole editor and proprietor of this long-established Journal. We wish him all success in his new field of labor.

Medical Examiner (Philadelphia).—We perceive, in the December number of this Journal, that its worthy editor, Dr. HOLLINGSWORTH, gives his valedictory, and announces the cessation of that work as an independent journal—arrangements having been effected by the publishers, Messrs. Lindsay & Blakiston, with Drs. Gross and Richardson, for the union of the *Louisville Review and Medical Examiner*, and the establishment thereby of a new journal, to be called the *North American Medico-Chirurgical Review.* We cordially wish the new enterprise success.

Weekly Comparison of the Weather and Deaths in the City, continued from the November Number.

Weeks in 1856.	Mean temperature.	Evaporation below.	Mean daily ranges.	Days mostly clear.	Days of easterly wind.	Days of westerly wind.	Rain—inches.	Mean hight barometer.	Mean weight, vapor in a cubic foot of air.	Additional to saturate	Total number deaths.	Children.	Under two years.	Foreign nativity.	Brain and nerv. syst.	Lungs and throat.	Digestive system.
	°	°	°					Inches.	Grs.	Grs.							
44th	46	8½	17	2½	1½	5½	·3	29·91	2·09	1·90	401	247	171	125	72	102	163
45th	50½	8¾	14½	4½	1½	5½	·8	30·00	2·33	2·20	358	214	151	115	66	109	63
46th	45⅝	9¼	15⅝	5	2	5	·0	30·04	1·84	2·16	395	265	191	106	58	130	67
47th	42¼	10¾	18¾	5	½	6½	·3	29·92	1·46	2·04	395	250	170	119	65	120	79
48th	46½	7¼	13	3½	2	5	·8	29·91	2.26	1·80	410	270	184	105	68	127	68
49th	38½	6½	11	3	3	4	1·2	29·80	1·84	1·26	397	255	169	111	76	117	53
50th	36½	8	14	4½	1¼	5¾	·75	30·00	1·41	1·46	442	287	179	124	92	138	46
51st	28	4¼	10	4	4	3	1·7	30·06	1·44	·81	373	236	211	114	61	134	31
52nd	27	5	8	3½	1	6	·0	29·75	1·31	·91	407	277	191	88	67	140	40
Nov. 1856	45½	8½	15½	18	6½	14	2·1	29·89	1.86	2·16	1719	1091	754	495	288	533	307
Nov. 1855	45	6	11	20	18	12	4·17	30·00	2·81	1·21	1411	924	630	383	255	401	234

Necrological Table continued.

Weeks in 1856.	Still born & premat'r.	Eruptive fevers.	Scarlatina.	Small-pox.	Measles.	Typhus and typhoid fevers.	Other general fevers.	Diarrhœa & Dysent'y.	Croup.	Marasmus.	Apoplexy and congestion of brain.	Hydrocephalus and inflammation of brain.	Convulsions.	Congestion and inflam. of lungs.	Bronchitis and catarrh.	Consumption.	Violent causes.	Burials.	
																		Calvary Cemetry.	Potter's Field.
44th	32	32	20	6	4	9	4	18	9	45	10	22	22	10	6	59	9	180	43
45th	39	22	12	4	6	10	6	9	9	30	12	16	21	32	8	39	17	151	40
46th	42	43	26	8	7	8	7	8	17	25	7	20	21	27	6	60	11	160	57
47th	41	39	24	12	3	8	5	9	14	28	17	15	19	27	12	52	9	171	33
48th	39	45	37	3	2	6	7	8	11	28	13	18	24	35	9	56	15	171	44
49th	36	56	39	12	4	4	4	10	16	25	14	18	27	31	7	46	12	151	45
50th	38	66	45	13	5	7	7	3	20	17	12	22	43	31	6	67	16	178	30
51st	34	51	35	12	4	4	3	6	21	14	7	16	28	47	4	54	9	142	29
52nd	40	68	46	7	8	5	7	7	19	18	7	13	31	40	10	64	12	171	32
Nov. 1856	164	167	113	28	20	35	27	39	54	127	54	78	92	136	39	223	60	657	183
Nov. 1855	167	115	89	8	8	36	20	33	48	97	55	83	94	85	38	191			

The mortality (1719) in November 1856 was unusually large. The average number of deaths in the same month for the previous ten years not having been over 1200. It would be difficult to state all the causes of this increase. The weather was quite as good, and the city in as cleanly a condition as usual. No peculiar epidemic was noticed, and physicians in general reported no unusual amount of sickness in private practice. As the increase of deaths was among the poorer classes, and those attended from public institutions, it can be partially accounted for by the fact that the immigration was larger, and more sickness prevailed in their vessels than in November, 1855.

Medical Retrospect.—It is our design to effect arrangements whereby all improvements in the several divisions of medicine will be chronicled in the Retrospect department of this Journal; and in order that such effort may prove successful, each division will be prepared by a medical gentleman, who devotes especial attention to the branch over which he presides. That of Obstetrics is prepared by our collaborator, Geo. T. Elliot, M.D.

OBITUARY.

Death of Dr. David Green.—Died at his residence in this city, of apoplexy, on the 20th of October last, David Green, M.D. Dr. G. was an old and respectable practitioner and a member of the Academy of Medicine. He had an extensive practice, and was greatly esteemed by his numerous friends.

Death of Dr. W. C. Wallace.—Died in this city, on the 25th of October, William Clay Wallace, M.D., in the fiftieth year of his age. He was a pupil of the celebrated Mackenzie, of Glasgow, and as an occulist, had a wide and extended practice. As a writer, he will be remembered as the author of papers relating to the Physiology of Vision. His death was sudden and unexpected.

Death of Dr. J. L. Crane.—Died at New Utrecht (near Fort Hamilton), of yellow fever, on the 16th of September, John Ludlow Crane, aged about 35.

It is with a heavy heart that we record the decease of our young, talented, and amiable friend. We first knew him as a student of medicine at the New York University Medical College in 1844–5, where he attracted our particular notice for his intelligence as well as his great zeal and devotion to study. Kind and amiable in his deportment, gentlemanly in his manners, and ingenuous in all his conduct, he won alike the respect and friendship of pupils and teachers. Doctor Crane was a native of Hackettstown, New Jersey, the son of Ross Crane, an old and respected resident of that place. He graduated at Princeton College in 1842, and at the University Medical College in 1845. Shortly after graduating he settled at Hanover, New Jersey, and commenced the practice of his profession, where he became acquainted with, and married, Miss Ely, daughter of Caleb H. Ely. About two years after, by the earnest solicitations of his friends, he located at Brooklyn City, where he remained but a short period, and forming the acquaintance of Dr. Dubois, of New Utrecht, they joined in copartnership, and removed to the former place about the middle of October, 1850, where he leaves a wife and three children. His partner also fell a victim to the epidemic a few days previous to himself.

Sad is the history of the doings of disease and death,—sad, indeed, when the theme is of those whom we at once love and respect. He was devoted to, and beloved by, his patients, ardent in the pursuit of knowledge, honorable in all his undertakings. He was rising rapidly in the estimation of the public as well as the profession, and he fell a victim, after a short illness, to yellow fever contracted in an infected district, and at the bed-side of his patients. Had our friend lived, he would have achieved fame, reputation, and wealth; he lived long enough to acquire what are of, perhaps, more real value—the love, admiration, and friendship of all who enjoyed his acquaintance. Dr. C. was a sincere and practical christian, having joined the Presbyterian Church as early as 1832, in the duties of life exemplary and irreproachable. His surviving friends knew him, they will remember him during their own brief "loitering by the way"—and after all, what greater sublunary good, than friendship's remembrances, is there inscribed on the tablets of hope? His labors are ended—the scene is closed—care has ceased to trouble him—the weary one is at rest.

J. H. V.

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